AN INVESTIGATION OF THE RELATIONSHIPS BETWEEN TWO PRE-SCHOOL PROGRAMS ON THE ADJUSTMENT AND READINESS OF DISADVANTAGED PUPILS

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This is to certify that the

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ABSTRACT

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by

Vera L. Pitts

Statement of the Problem

The purpose of this study was to compare the social growth, emotional development, academic readiness, and general readiness of kindergarten pupils with varying amounts of pre-kindergarten formal school experience. One group had participated in a nine month pre-school program, the second in an eight week summer project, while the third had no formal antecedent experience. Eight hypotheses related to the aforementioned variables were tested.

The Population

This study included eighty-seven kindergarten pupils who were matched according to birthdate (born in same month), birthplace (born in Flint), sex, and race (Negro). They were divided into three equal groups (twenty-nine each), according to the duration of there pre-kindergarten experience.

Experimental Group I - pupils who participated in a nine month pre-school program.

Experimental Group II - pupils who participated in a summer pre-school

program.

Control Group - pupils with no pre-school experience.

Methodology

Instruments used to gather basic data were: The Brenner Gestalt Developmental Test of School Readiness, The Metropolitan Readiness Tests Form A, and The Operation Head Start Behavior Inventory.

The data were statistically described by a Kruskal Wallis One Way Analysis of Variance designed by the CDC 3600 Computer at Michigan State University Computer Laboratory.

Findings

Social Growth (Hypotheses I and II). Significant differences were found among the three groups favoring the group with the longest period of pre-school attendance on several dimensions of social growth: dependability, cooperation and independence.

Emotional Development (Hypotheses III and IV). Findings regarding emotional development were inconclusive. On the instrument (BGT), used in October and May, no significant differences were perceived. The OHBI, used only in May, reported significant differences on dimensions of emotionality, self-confidence, jealousy, persistence, and enthusiasm. Without the additional data afforded by the OHBI, the latter hypotheses would have been accepted.

Results were inconclusive and contradictory; thus, no defensible conclusion was possible. On rank sum scores on both instruments differences favored the longer pre-school experience.

Academic Readiness (Hypotheses V and VI). No significant differences existed among the three groups in reading nor arithmetic readiness.

Total Readiness (Hypotheses VII and VIII). No significant differences were found among the three groups related to total readiness (adjustment).

Conclusions

1. The length of pre-school attendance was positively related to facilitating some dimensions of social growth (cooperation, independence, and dependability) among disadvantaged children.
2. The length of pre-school attendance was not related to the academic readiness nor total readiness of the groups studied.
3. A consistent pattern emerged from rank sum scores indicating that the duration of pre-kindergarten attendance may be related to the readiness variables though not at a statistically significant level. Differences were in favor of the longest period of attendance.

Implications

Advocates of pre-school education programs for the disadvantaged

cannot continue indefinitely to claim successes in view of research evidence available. Generally programs seem inadequate and inappropriate for tasks they purport to accomplish.

Personnel (teachers and administrators), need background in early childhood education. Programs implemented must be articulated with the total educational enterprise. Research findings regarding the disadvantaged must be translated into meaningful curricula and parents must be involved in a significant way.

It is important that instruments be developed which would be suitable to measure social growth and emotional development for use with young children. A non-verbal instrument would seem appropriate.

Pre-school education sounds so logical and promising that few have paused to question its validity. This program is not a panacea to the problem and etiology of disadvantagement, and hopefully it would not be oversold. The danger of turning this new trend into a fad must be recognized and averted.

Recommendations

1. A meaningful and appropriate curriculum which reflects goals of early childhood education pertinent to educating disadvantaged children should be developed.
2. Parent involvement must be solicited.

3. The strengthening of the community school program at primary and pre-school levels.
4. In-service education for teachers, aides, and administrators.
5. Longitudinal studies should be made to determine the optimal duration of pre-kindergarten attendance.
6. The potency of pre-school programs needs to be increased.

AN INVESTIGATION OF THE RELATIONSHIPS BETWEEN TWO PRESCHOOL PROGRAMS ON THE ADJUSTMENT AND READINESS OF DISADVANTAGED PUPILS

By

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The culmination of this project leaves the writer indebted to many people who deserve to be acknowledged. To attempt such a list, however, would be impossible for the number is legion. Consequently many people must be nameless, but it is not the intent of the writer that they should go unrecognized, nor that their importance should be diminished.

The writer would be remiss, however, if she failed to acknowledge and express gratitude to the committee who guided this endeavor. Dr. W. Robert Houston, chairman, worked patiently with the writer throughout the project. His counsel and encouragement far exceeded duty. Dr. Ann G. Olmsted's skill was invaluable in assisting the writer to critically evaluate the project. The concern of William V. Hicks provided encouragement for completing this study. Dr. Clyde Campbell offered personal and professional guidance. His interest was that of a close friend.

In retrospect it would be difficult to determine when the idea for this undertaking was conceived. Dr. Robert Whitt, however, was responsible for the writer's move to Michigan where study began with this goal in mind. A Mott Fellowship provided financial assistance during the first year.

The Flint Community Schools and Mrs. Harriet Latimer, Research Director, graciously extended their resources. Sincere thanks to the principals and teachers who facilitated the operational aspects of the study.

Mrs. Marion Stebbins assisted with the editing of the manuscript.

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Without the support of my husband, Leonard, this project would have never materialized. His confidence and encouragement were a constant source of inspiration.

It is the hope of the writer that she will justify the trust and confidence of the many people who gave unstintingly of their time and energy to make this dream a reality.

Vera L. Pitts

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Reclaim a child and you reclaim a whole world ---
everyone he will meet, everything he will touch

Dr. Albert Schweitzer

CHAPTER I

INTRODUCTION

With the advent of compensatory education the pre-school movement has experienced a renaissance and been given a new impetus. Major goals of such programs include providing equality of opportunity for all children and attention has focused on the needs of a group heretofore largely ignored. These are children whom we have variously labelled as "disadvantaged," "disaffected," and "culturally deprived." It is alleged that for them the typical school experience offers minimal satisfactions due to physical, psychological, and/or cultural handicaps outstanding at the time they enter school. Multiple factors seem to conspire to deny them many of the rewarding experiences that their middle-class counterparts enjoy both within the school environment and in the broader society.

Programs initiated to ameliorate handicaps and deficiencies of disaffected children have used varying approaches. It seems natural that one strategy is aimed at preparation for entrance into school and the beginning of a satisfying educational career. Pre-school programs offer one such attempt.

> Research shows clearly that the first four or five years of a child's life are the period of most rapid growth in physical and mental characteristics and of greatest susceptibility to environmental influences. Consequently, it is in the early years that deprivations are most disastrous in their effects. They can be compensated for only

with great difficulty in later years, and then probably not in full. [1]

Contemporary aims and objectives of pre-school instruction as expressed in child development literature are often classified into four categories: intellectual, social, emotional and intellectual. Social needs are fundamental and predominant, but intellectual needs are vital too. Although it is theorized that early school attendance can provide a foundation for significant changes in the disadvantaged child's readiness for beginning school tasks and influence his social growth and emotional development, research has not substantiated these allegations.

The need to improve the prognosis for pupils with limited backgrounds is urgent. A study made by the superintendents of fourteen large urban areas revealed that whereas one in ten children in large cities was classified as being disadvantaged in 1950, the ratio in 1960 was one in three. They projected that unless major steps are taken, the figure might well be one in every two pupils in 1970. [3] This group could offer society considerable intellectual

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[1]Educational Policies Commission, "Universal Opportunity for Early Childhood Education," National Education Association Journal, LV, No. 8 (November, 1966), 8.

[2]Pauline Sears and Edith Dowley, "Research on Teaching in the Nursery School," Handbook of Research on Teaching (Chicago: Rand McNally and Company, 1963), p. 818.

[3]Frank Reissman, The Culturally Deprived Child (New York: Harper and Brothers, Inc., 1962), p. 1.

potential and leadership.

> . . . the greatest reservoir of undiscovered and undeveloped intellectual talent in America is not in the upper or middle class neighborhoods . . . the actual numbers of intellectually bright children in poor homes are in excess of those to be found in relatively few homes of business and professional leaders.[4]

Recently the Educational Policies Commission of the National Education Association passed a resolution recommending that formal schooling begin at age four "for those children who, through economic or social deprivation, may be seriously impeded in their progress through public schools, and consequently in their participation in a democratic society." Federally supported programs inaugurated during the past few years have attempted to accelerate the intellectual and social development of disadvantaged children through pre-school projects. These are usually referred to as "Head Start" programs. Some of these encompass the nine month school year, while others include an eight week summer experience. The extensiveness of these programs is determined by the local community and is usually dependent upon financial resources available.

Significance of the Study

Much speculation exists regarding the effects of pre-school attendance.

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[4]Ibid., p. 6.

This study was concerned with evaluating the consequences of varying time periods of pre-kindergarten attendance on the social growth, emotional development, and school readiness of socially disadvantaged children. Generally researchers have devoted attention to school readiness, and have neglected studies involving motor skills, social growth and emotional development. The paucity of recent research in these areas is prima facie evidence of the need to investigate these dimensions of early childhood education.

> Far too often comparisons are made in terms of effectiveness of formal school work, to which the contribution of nursery school and kindergarten is minor. Much too seldom are comparisons made in terms of general adjustment, social relations, personal development, and zest and enthusiasm for living --- the areas emphasized in early education.[5]

During the past two years approximately 1.3 million disadvantaged children have been enrolled in pre-school programs in 2,400 communities.[6] In 1965 the Federal Government spent more than $90 million on this enterprise. This expenditure was repeated last year, and indications are that projects of this nature will be continued and even expanded in the future.

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[5]John E. Anderson, "The Theory of Early Childhood Education," Early Childhood Education, National Society for the Study of Education Yearbook, Part I (Chicago: University of Chicago Press, 1947), pp. 96-97.

[6]William Brazziel, "Two Years of Head Start," Phi Delta Kappan, XLVIII (March, 1967), 344.

> It seems safe to predict more changes in the approaches to early education in this country, however, and this includes the primary years of the elementary schools in depressed areas. Even such conservative (but public-spirited) men as John McCone are urging federal outlays of $4-5 billion per year . . . to provide underprivileged children with a good education.[7]

Such wholesale adoption of pre-school intervention as a technique to resolve the dilemma of disadvantagement seems premature in view of findings now available. Prominent educators are sounding serious warnings and are concerned that it may become nothing more than a fad. Dr. Martin Deutsch, a pioneer and leading authority in this movement, commented:

> There is more interest in pre-school programs than is supported by the knowledge we now have. There seems to be a feeling that putting a good deal of money into special education programs will stop the violence in the streets . . . . I just don't think this is the case.[8]

It seems appropriate, almost imperative, to review and reevaluate earlier research, and to initiate new studies which will provide additional insights and dimensions. The profusion of literature available on cultural disadvantagement and pre-school programs attest to the relevance and timeliness of this study. The vast sums being spent to enhance educational opportunities for the disadvantaged and to facilitate social, emotional, and academic

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[7] Ibid., p. 348.

[8] Fred M. Hechinger (ed.), "Passport to Equality" Pre-School Education Today (New York: Doubleday and Company, Inc., 1966), pp. 9-10.

adjustment through pre-kindergarten programs of varying designs, emphasized the need for this study.

The Problem

Statement of the Problem.

The purpose of this study was to compare the social growth, emotional development, academic readiness, and general readiness of kindergarten pupils with varying amounts of pre-kindergarten formal school experience. One group had participated in a nine month pre-school program, the second an eight week summer project, while the third group had no formal school experience prior to kindergarten.

Hypotheses

Specifically, this study was designed to test eight hypotheses, each of which is stated in the null form:

Hypothesis I - There are no differences in social growth at the beginning of kindergarten attendance among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Hypothesis II - There are no differences in social growth at the end of kindergarten attendance among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten

program, and pupils with no pre-kindergarten participation.

Hypothesis III - There are no differences in emotional development at the beginning of kindergarten attendance among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Hypothesis IV - There are no differences in emotional development at the end of kindergarten attendance among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Hypothesis V - There are no differences in academic readiness at the beginning of kindergarten attendance among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Hypothesis VI - There are no differences in academic readiness at the end of kindergarten attendance among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Hypothesis VII - There are no differences in total readiness at the beginning of kindergarten attendance among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Hypothesis VIII - There are no differences in total readiness at the end of kindergarten attendance among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Assumptions

The following assumptions underlie this study:

1. That it is of value to know how varying periods of pre-school attendance is related to social growth, emotional development, and readiness of disadvantaged youth.
2. That the quality of the pre-school experiences was similar and comparable.
3. That the instruments used were reliable and valid.
4. That the population sample of the study was representative of disadvantaged children in urban areas.

Definitions of Terms

Culturally Disadvantaged. For purposes of this study a disadvantaged child is defined as one who lacks many of the opportunities and advantages available to most American children, and is, therefore, unable to make

satisfactory progress in a typical school.[9] These youngsters have a cultural background, but it is one which places them at a disadvantage in the school environment.

> The culturally deprived or disadvantaged have been described as those living in deprived neighborhoods, generally of average intelligence, . . . who have only a 50-50 chance to graduate from high school. More than thirty per cent of these children will end up on relief, and over a five or six year period in school their I. Q. scores will steadily decline.[10]

The deprivations of this group include a lack of or need for necessities which may be economic, educational, social-psychological, and/or cultural.

> In any case there is a common denominator: not enough. Not enough income, information, skills to get along successfully; no precedent for success; insufficiencies of every sort.[11]

Compensatory Education. This term, coined by President John Fischer of Columbia University, describes efforts to improve educational opportunities and eliminate deficiencies that some pupils bring to the classroom. These

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[9]Reissman, op. cit., p. 36

[10]Robert J. Havighurst and Thomas E. Moorefield, The Disadvantaged Industrial Cities, National Society for the Study of Education Yearbook (Chicago: University of Chicago Press, 1967), p. 46.

[11]Association for Supervision and Curriculum Development, "Disaffected Children and Youth," Educational Leadership, XX, No. 5 (February, 1963), 291.

programs are as varied as the needs of the children they serve. Some consist of a single activity. Others encompass a planned sequence of experiences and constitute an entire program. Head Start is one such program. Compensatory education implies that schools shall provide necessary stimuli to make up for differences in pupils' experiences and opportunities.

Head Start. An antipoverty pre-school program designed to prepare disadvantaged children for successful entrance into school. It has six major classifications: the education program, health services, social services, psychological services, nutrition, and a parent participation program. The educational aspect of the program helps children to develop vocabulary and verbal skills to become familiar with school routines, and to want to learn. The program stresses cultural enrichment.

Social Growth. Learning to live happily and cooperatively with others is a determinant of social growth. At birth the child has no social concern and is not basically a social being. Social development reflects the child's expanding world: from ties to his mother and family, he reaches out for peer relationships and approval from other significant adults. Cronbach[12] posits that children who feel accepted and wanted during pre-school years usually remain trusting as they work out later social relationships.

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[12]Lee J. Cronbach, Educational Psychology (2nd ed.) (New York: Harcourt, Brace and World, 1963), p. 114.

Piaget distinguished three stages of social development:

1. egocentrism - individual impervious to social stimulation from without.
2. child makes effort to enter into real social communication.
3. reciprocity and mutual respect between persons.

The age sequence of these stages probably varies with different socio-economic groups and cultures. Each social class appears to have distinct values, characteristic patterns of behavioral expectation, and differences in child-rearing methods. Evidence indicates that upper-class children pass through the earlier stages more rapidly than disadvantaged children. [13]

Socialization is one of the most significant tasks a child must learn. During the pre-school years the child is expected to become aware of others' feelings and to act so that others will also be happy. [14]

> Social dealings with others, whether they be friendly or combative, involve many techniques and skills much as do the performances of riding a bicycle or tying one's shoes. The technique which a child uses to hold his own involves skills which must be learned. [15]

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[13]Ruth Strang, An Introduction to Child Study (New York: The Macmillan Company, 1959), p. 293.

[14]Don C. Dinkmeyer, Child Development: The Emerging Self (New Jersey: Prentice-Hall, Inc., 1965), p. 152.

[15]Arthur T. Jersild, Child Development and the Curriculum (New York: Teachers College, Columbia University, 1946), p. 68.

Emotional Development. Emotional growth is that personality dimension describing the ability to live comfortably with one's self and his feelings.[16] Actually emotions are easier to describe than to define, and are often used synonymously with such concepts as needs, feelings, and prejudices. Emotions play a significant role in the development of the child. Several contemporary psychologists believe emotion to be antecedent to all experiences and fundamental to them to the extent that all learning is acquired in emotional terms.[17] Emotions are highly individualized. Similar situations may elicit different responses from different children.

Emotional development begins with relatively undifferentiated responses at birth which develop into a pattern as the child matures. This pattern is represented in Table 1. As his interests and abilities expand, the child is able to cope with many situations which aroused him at an earlier time. Simultaneously he becomes vulnerable on new fronts. During pre-school years the child's expression of emotion tends to become less violent and explosive and more refined, subdued, or furtive.[18] Emotional maturity is always relative.[19]

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[16]Willard C. Olsen, Child Development (Boston: D. C. Heath and Company, 1959), p. 4.

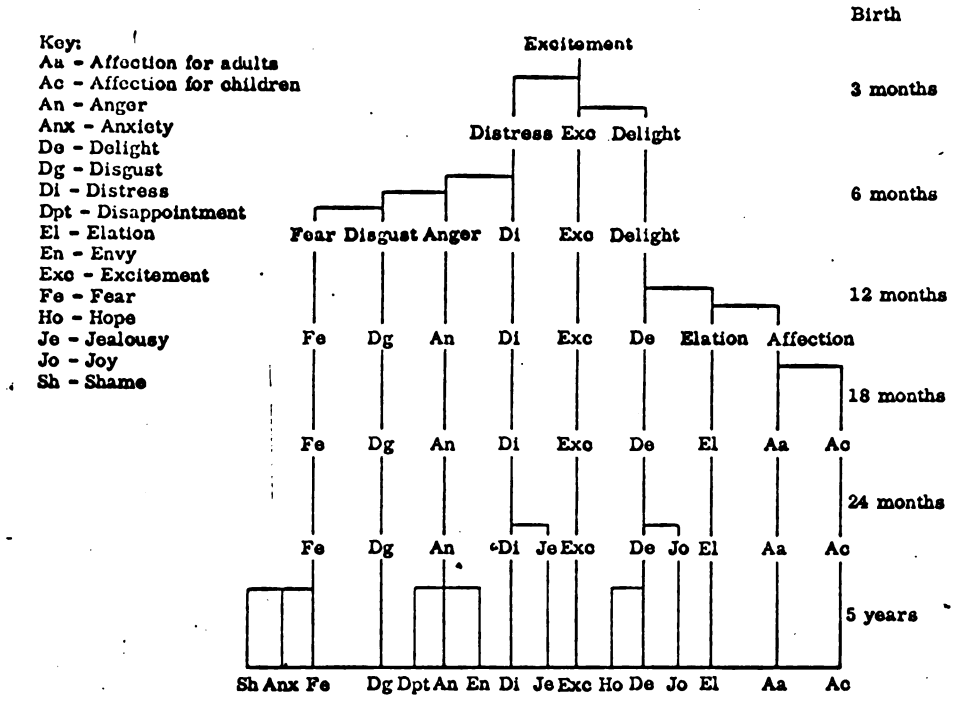
[17]Dinkmeyer, op. cit., p. 254.

[18]Jersild, op. cit., p. 94.

[19]Dinkmeyer, op. cit., p. 264.

TABLE 1

DIAGRAMMATIC REPRESENTATION OF THE DEVELOPMENT OF EMOTION[20]



Some researchers posit that basic emotional behavior patterns are established by the age of three. Subsequent to this time changes are the result of specific environmental changes.

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[20]K. M. B. Bridges, Journal of Genetic Psychology, XXXVII (1930), 524 and Child Development, III (1932), 340. From H. B. English, Dynamics of Child Development (New York: Holt, Rinehart and Winston, Inc., 1961), p. 114. From Don C. Dinkmeyer, Child Development: The Emerging Self (New Jersey: Prentice-Hall, Inc., 1965), p. 113.

> Emotions affect performance of all kinds. It is closely related to the quality of personal development, as well as to language development and to the continuity of the academic learning curve. Its effect on mental growth and on motor coordination has likewise been demonstrated.[21]

Adjustment. Characteristics of social growth and emotional development often overlap and complement each other so as to legislate against delineation. Nevertheless for purposes of this study it was necessary to make such a division. The writer attempted to synthesize findings in the field of child development and educational psychology, and on the basis of what appeared to be a consensus of leading authorities made the following classifications which is intended to include only diminsions which were pertinent to this study.

Characteristics of Social Growth

Consideration	Sociability
Dependability	Independence - Dependence
Goal Direction	
Cooperation	Achievement
Politeness	Leadership

Characteristics of Emotional Development

Self-Confidence	Exploration
Emotionality	Creativity
Interest in Learning	Persistence
Motivation	Jealousy
Curiosity	Attention - Seeking
Enthusiasm	

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[21]Cecil V. Millard, Growth and Development in the Elementary School Years (Boston: D. C. Heath and Company, 1951), p. 208.

Thus adjustment is used generically to include components of social growth and emotional development. It describes the person's ability to cope with his environment.

Readiness. The concept of readiness represents an educational approach as well as a principle of development. It considers the timeliness of what is to be taught in relation to the child's ability. Some criteria utilized in estimating readiness include age, I. Q. scores, and reading ability. Readiness, however, is not readiness for a subject or topic; it is readiness for a certain learning experience.[22] Social development and emotional development represent learned behavior for which readiness experience must be planned.

> Readiness for learning of any type is a complex product of many factors which include psychological and physical maturity. past experience, home background, previous mastery or experiences with success.[23]

This is a highly individualized matter and children differ in rate, level of growth. and pattern.

For this study academic readiness was limited to reading and arithmetic. Total readiness referred to the dependent variables included in this study: social growth, emotional development, and academic readiness. This was based

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[22]Cronbach, op. cit., p. 250.

[23]Vernon E. Anderson, Principles and Procedures of Curriculum Improvement (New York: The Ronald Press, 1965), p. 124.

on the organismic view of child development which posits that all changes in humans involve the total organism because the organism is an integrated whole.[24]

The Research Design

Selection of Schools. The schools selected for this research are three of the thirteen elementary schools involved in compensatory education programs in Flint, Michigan. The thirteen inner-city schools are found in an old part of the city and enroll the majority of Negro pupils who attend elementary schools. These schools serve the center of the city and represent the hard core of academic under-achievement and the myriad of other problems which characterize inner-city environments.

Selection and Testing of Pupils. Ninety pupils were selected for this research from five kindergarten classrooms in the three schools. They were matched on the basis of age, sex, race, and birthplace, and divided into three groups using length of the pre-school experience as the independent variable.

Experimental Group I - pupils who participated in a nine month pre-school program.

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[24]Olsen, op. cit., pp. 209-211.

Experimental Group II - pupils who participated in a summer pre-school program. (Eight weeks)

Control Group - pupils with no pre-school experience.

All pupils were tested on the Brenner Gestalt Test of School Readiness in October of their kindergarten year. A selected random sample of this population (60 pupils) was tested on the same instrument in May of the ensuing year (1967). The Metropolitan Readiness Test was administered to all pupils in May. Simultaneously teachers completed the Operation Head Start Behavior Inventory on each pupil.

Collection of Data. To test the hypotheses posed by the study the following instrumentation was used:

To test Hypothesis I, October test scores on the Brenner Gestalt Test, Social-Emotional Behavior Scale, were analyzed separately. Then the sum of the scores was analyzed. Components of this scale were: consideration, dependability, goal direction, and cooperation.

To test Hypothesis II, May test scores on the Brenner Gestalt Test, Social-Emotional Behavior Scale, were analyzed separately on the components enumerated in the previous hypothesis; then the sum of the scores was analyzed. Separate scores were analyzed on dimensions of the Operation Head Start Behavior Inventory which included: cooperation, independence, achievement, and leadership. Then the sum of the scores was analyzed.

To test Hypothesis III, October test scores on selected components of the Brenner Gestalt Test, Social-Emotional Behavior Scale, were analyzed separately. Then the sum of the scores was analyzed. Components were: emotionality, self-confidence, interest in learning, and motivation.

To test Hypothesis IV, May test scores on the Brenner Gestalt Test, Social-Emotional Behavior Scale, were analyzed separately on the components enumerated in the previous hypothesis; then the sum of the scores was analyzed. Separate scores were analyzed on dimensions of the Operation Head Start Behavior Inventory which included: enthusiasm, persistence, emotionality, self-confidence, and jealousy.

To test Hypothesis V, October total test scores on the School Readiness Evaluation scale of the Brenner Gestalt Test were analyzed.

To test Hypothesis VI, May test scores on the School Readiness Evaluation scale of the Brenner Gestalt Test were analyzed. Total scores on the Metropolitian Readiness Test were also assessed.

To test Hypothesis VII, October test scores on the Brenner Gestalt Test, Achievement-Ability scale were analyzed separately; then the sum of the scores was analyzed. Components of this scale were: persistence, dependence, thinking ability, reading and number achievement, hand-eye coordination, adjustment to environment and methodical ability.

To test Hypothesis VIII, May test scores on the sum of the scales in

the Brenner Gestalt Test (Social-Emotional Behavior Scale, School Readiness Evaluation Scale and Achievement-Ability Scale) were analyzed to determine general readiness.

The Instruments Used. The Anton Brenner Developmental Gestalt Test of School Readiness, a test based on principles of developmental and Gestalt psychology, was used to assess readiness and also as a predictive measure of social growth and emotional development. It consists of five tasks which require one or more perceptual responses.

This test has been standardized and correlated with teachers' judgments of children's achievements, abilities, and maturities. Also, it has been correlated with many standardized tests including the Gates Reading Test, Stanford-Binet Intellegence Scale, and Metropolitan Readiness Tests. It appears that this is a valid and reliable measure of school readiness and can be used in place of any of the above tests for making this kind of determination.

The Metropolitan Readiness Tests measure aspects of readiness including perceptual ability, attention span, linguistic maturity, and ability to follow directions. There are six subscales: word meaning, listening, matching skills, alphabet recognition, number concepts and copying. The score on each subtest is the number of items correct. Readiness scores can be translated into letter ratings and percentile ranks.

The Operation Head Start Behavior Inventory is a teacher rating

instrument which estimates pupils adjustment to school environment. The total rating is a composite of teacher's judgements on sixteen characteristics which are divided into nine behavior categories:

I	II	III
Sociability Cooperation Politeness	Independence Dependence	Curiosity Enthusiasm Exploration Creativity
IV	V	VI
Persistence	Emotionality	Self-Confidence
VII	VIII	IX
Jealousy Attention-Seeking	Achievement	Leadership

This instrument was developed by the Research Division of the Office of Economic Opportunity. No norms are yet available.

Methods of Research. The Kruskal Wallis One Way Analysis of Variance was used to analyze data from the Brenner Gestalt Test, the Metropolitan Readiness Tests, and the Operation Head Start Behavior Inventory. This nonparametric procedure was used to test the null hypothesis that k (number) independent samples come from identical populations against the alternative that the means of these populations are not always equal. Scores are converted into ranks rather than simply dichotomized as above and below

the median.

Plan of Presentation

The review of research and related literature pertinent to the problem is considered in Chapter II. Chapter III outlines the research design and includes information regarding the sample with whom the investigator worked, data collection procedures, and methods of research. The instrumentation in the study is described. Data analysis are included in the subsequent chapter; and the summary of findings, conclusions, and recommendations are in the final chapter.

CHAPTER II

REVIEW OF RESEARCH AND RELATED LITERATURE

Although pre-school education is not a new phenonema in American education, it was ignored for several decades. In 1965, the Head Start Project focused national attention on early school intervention as a possible way to reduce the effects of cultural deprivation on learning and socialization. For many years research findings in child development have pointed out the importance of the pre-school years. Since school failure and personality maladjustment probably begin at this time, the pre-school level would seem a most appropriate time to intervene.

> If we in education begin our work with three and four year olds, with nursery school classes, we have a powerful chance to be influential in canceling out deprivations that will otherwise affect every aspect of their lives. If we wait until they reach third grade, our prognosis is drastically diminished. [1]

The period of greatest research concentration in pre-school education was 1925-1940. During this time the primary concern was intellectual development and the research attempted to determine whether pre-school attendance could accelerate mental growth. Studies to determine the relationship between

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[1]Francis Keppel, "In The Battle For Desegregation: What are The Flanking Skirmishes? What Is The Fundamental Struggle?", Phi Delta Kappan, XLVI (September, 1964), 5.

pre-school attendance and other aspects of child growth and development are conspiciously absent in the literature between 1940 and 1960. The few studies that were made in this interim concentrated on subjects from the middle socio-economic strata. Only recently have researchers focused on the sub-culture of the disadvantaged. The paucity of current research is prima facie evidence of the need to investigate the several dimensions of pre-school education and the impact on the problems of disadvantagement. Studies made prior to 1940 are listed, but not reported in detail.

Pre-School Education and The Disadvantaged

The idea of pre-school education for children from lower socio-economic groups appears to have its genesis in Rome with Maria Montessori. Educators are rediscovering Montessori and investigating parallels between the pedagogical problems she faced in the slums of Rome and the problems of the culturally dispossessed. Many salient features of the model which Montessori provided for early childhood education are now included in Head Start and other pre-school programs.

Studies of reports, proposals and curriculum guides reveal that objectives for pre-school programs for disadvantaged children include the

development of

. . . a positive self-image
. . . an interest in his environment
. . . a wide background of information and first hand experience
. . . the ability to work and play individually and with other children
. . . a sense of respect for others
. . . the ability to be independent and self-sufficient
. . . an increasing attention span
. . . the ability to give and receive affection
. . . adequate habits of conduct
. . . wholesome attitudes toward schools[2]

These goals are compatible with child development literature, and are also related to the investigation.

Presently there is a plethora of information about disadvantaged children. Most of the studies have delineated characteristics thought to be unique to this group and have focused on weaknesses, limitations and deficits. Reissman's[3] work is an exception; it concentrated on strengths. Because the child's early environment and family background affect his future adjustment and success, it seemed appropriate to ferret out findings on the aspects of this environment which have implications for the questions posed in this investigation.

The Frame of Reference. Studies of home and family life of the disadvantaged suggest low formal educational levels and limited vocational and

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[2]Language Programs for the Disadvantaged, "Report of the National Council of English Teachers, 1965, pp. 45-46.

[3]Reissman, op. cit.,

economic competence. The home provides few playthings and reading materials, thus a meager experiental background results. Although the family may be prematurely broken by divorce, desertion, and/or death, several parent substitutes share the household. Overcrowded and inadequate housing are not uncommon. Bloom estimated that the "long term over-all effect of living in a culturally deprived as against a culturally abundant environment" can be twenty I. Q. points.[4] He spaced the differences as follows: from birth to four years of age, ten I. Q. points; from four to eight years of age, six I. Q. units; from eight to seventeen, four I. Q. units. The implications are obvious. In terms of real or potential readiness and retardation, the most serious harm is already done by the time the child reaches the age of four. Thus environment, not heredity, puts a ceiling on his potential. Bloom favors a good antecedent experience to compensate for the inadequacies of this background.

> Goldfarb stated that the absence of early stimulation . . . appears to result in a paucity of feelings and emotional responses . . . and may produce, firstly, a complex emotional existence revolving about the core feelings of not being wanted and, secondly, social responses in which the child directs toward others the hostility that he has himself experienced.[5]

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[4]Benjamin Bloom, Allison Dance and Robert Hess, Compensatory Education for Cultural Deprivation (New York: Holt Reinhart and Winston, Inc., 1965), 84.

[5]William Goldfarb, "Infant Rearing and Problem Behavior." American Journal of Orthopsychiatry, XIII (January, 1943), (AMS Reprint), 249-265.

From his study of early social environment on school adaptation, Deutsch concluded that lower class pupils are not likely to be indoctrinated at an early age regarding the importance of school achievement and adjustment. He identified several differences between the lower and middle class environments which tend to handicap the former in his effort to adjust and succeed in school. Deutsch recommends pre-school experience to provide the "socio-cognitive preparation" necessary for the school experience. He posits that it offers a transition between the home and the school.

> . . . there are certain possibilities for social intervention on the child focused level that may open individual escape hatches and that might require minimal structural and process change in the current school operation. The most important of these areas of social intervention, and one that comes least into conflict with existing institutionalized barricades to change, would be that of an intensive, highly focused, pre-school training program.[6]

Voluminous literature in the field of child development confirms the fact that pre-school years constitute a critical and important period of development. Researchers now theorize that good pre-school programs can achieve the following:

> . . . antecedent preparation for school; enrich developmental areas which are functional and operative in school learning; foster acquisition of basic skills; interpret appropriate behavior for coping with school and

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[6] Ibid., p. 10.

society; help develop a positive self-concept.[7]

Pre-School Compensatory Education Programs

Much descriptive information is available regarding many pre-school compensatory education programs, but most projects are in the "progress report" stage and results to date have been more suggestive than conclusive.

Pre-school programs for the disadvantaged are shaped largely by assumptions about characteristics of this group which underlie their inferior academic performance. Cognitive and affective deficiencies are assumed to exist which include: "language facility, constriction in dealing with symbolic and abstract ideas, narrowness of outlook because of the narrowness of the familiar environment, passivity and lack of curiosity, low self-esteem, and lack of motivation for achievement."[8]

Reports about these programs revealed that other than differences of quality, principal differences among them have to do with duration, personnel, finance and cost, academic emphasis and parent participation. Getzels[9] has described program differences in terms of the different underlying assumptions

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[7]L. F. Ezekiel, "Changes in Egocentricity of Nursery School Children," Child Development, II (1939), 74-75.

[8]Clay V. Brittain, "Pre-School Programs for Culturally Deprived Children," Children, XIII, No. 4 (July-August, 1966), 130.

[9]Ibid., p. 133.

which the programs reflect about the deficiencies of culturally disadvantaged children. He suggested three broad categories:

1. Programs based on the assumption that differences between the culturally deprived child and the middle class child are matters of degree rather than kind. These programs would aim to provide supplementary experience.
2. Programs based on the assumption that what culturally deprived children mainly lack is familiarity with school related objects and activities. These programs would aim to provide academic-preparatory pre-school experience.
3. Programs based on the assumption that the culturally deprived child differs fundamentally from the middle class child in self-concept, language, values, and perceptual processes. The aim here would be to provide compensatory experience sufficient to modify environmental effects.

Programs vary in length from a few weeks or months to several years. No data was available regarding the number of full year programs now operative. Summer programs of the kind generated by Project Head Start are now found in approximately 2,400 communities.[10] The amount of time the child spends in the program varies from sessions of two and one-half hours a week to sessions

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[10]Brazziel, op. cit., p. 344.

of five hours a day for four or five days a week.

Pre-school programs use more volunteers than other compensatory education programs. [11] Many are staffed almost entirely by volunteers. The National Council of Jewish Women operate programs in about forty communities on a volunteer basis. [12] Government, foundation supported projects, and school related programs use a concentration of paid professional personnel. Programs of this kind are very expensive. Comparative data reported in the Philadelphia project are significant. In one program, all teachers had at least one year of experience in teaching deprived children; in two others the staff included inexperienced teachers. Differences favoring the experimental group were clearly evident in the first program. In the Peabody Early Training Project staff assignment considered sex and ethic group hoping to provide children with appropriate role models. [13]

Sources of finance include volunteer contributions, foundation grants, local school district funds and government financing. It is predicted that pre-school programs for the disadvantaged will become more numerous in the next

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[11]Edmund Gordon and Daxey Wilkerson, Compensatory Education for Disadvantaged (New York: College Entrance Examination Board. 1966). p. 49.

[12]Ibid., p. 271.

[13]Susan W. Gray and R. A. Klaus, "An Experimental Pre-School Program for the Culturally Deprived Children," Child Development. XXXVI, No. 4 (December, 1965), 887-898.

few years and that Federal money will provide a powerful stimulus to their development. [14]

The academic emphasis, if any exists, varies widely. Deutsch's project in New York[15] probably the best known of the pre-school programs, utilized a basic nursery school curriculum and added a variety of enrichment techniques. These focused on the areas of cognitive functioning, memory training, language development and motivation. Olson and Larson[16] focused on providing an abundance of field trips and language experiences for children. They assumed that increasing the breadth of experience would help the child accumulate concepts necessary for successful school achievement. The Baltimore Early Admissions Project[17] appears to be based upon individual as well as cultural differences. Particular attention is devoted to language development and the development of self-concept.

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[14]Frost, op. cit., p. 187.

[15]Martin Deutsch, "Nursery Education: The Influence of Social Programming on Early Development," Journal of Nursery Education, XIX, No. 3 (April, 1963)

[16]James L. Olson and Richard Larson, "A Pilot Study Evaluating One Method of Teaching Culturally Deprived Kindergarten Children," (Racine, Wisconsin, August, 1962) (Mimeographed.)

[17]Baltimore Public Schools, An Early Admissions Project: Progress Report, 1963-1964 (Baltimore, Maryland, 1964).

Many pre-school compensatory education programs involve the home and parent. This emphasis is not incidental. The possibility of altering the environment is assumed to be greater if parents participate. The Ypsilanti Project[18] uses a unique method of extending the school program into the home. The teacher goes into the home every week for two hours and works with parent and child. Many programs provide for parent discussion groups, parent education on matters of child guidance and individual parent meetings with professional psychiatric personnel. Programs differ in (1) the degree of parental commitment prerequisite to the child's enrollment in the program, (2) the level of parental involvement in the educational processes of the program, and (3) the means of enlisting and encouraging parent involvement.[19] This probably makes a difference in types of children served and attrition rates.

The Flint Community School Program. Compensatory education summer pre-school programs were initiated in two Flint elementary schools in 1964. Full year programs, however, have been operative in five elementary schools since 1960. Currently eight schools have full year programs and five schools have summer projects. These programs were originally funded by the

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[18]D. P. Weikart and N. Raden, "Perry Pre-School Progress Report," Ypsilanti Public Schools (Ypsilanti, Michigan, 1964).

[19]Brittain, op. cit., p. 134.

Flint Board of Education; now they are Federally supported.

Thirty children are served each day in each of the pre-kindergarten classes: fifteen in the morning and fifteen in the afternoon. The sessions are two and one half hours in length. During the 1966-67 school year approximately 550 children were recipients of a pre-school experience.

Although the schedule varied among classrooms, a similar pattern of activities was noted in all schools. The program included:

1. Relatively unstructured activities - indoor and outdoor play activities, working with puzzles, flannelboards, and other games.
2. Group activities - "show and tell" time, discussing interests.
3. Work time - developing ideas with crayons, scissors, paste and other materials.
4. Snack time - enjoying snacks and developing social courtesies.
5. Rest time - relaxing, sometimes to music.
6. Music - singing and participation in rhythmic activities.
7. Language arts - listening to stories, watching films and other activities which are intended to develop language.

Neither formal goals and objectives, nor a course of study have been developed for pre-kindergarten nor kindergarten programs. The kindergarten year seemed to duplicate many of the experiences of the previous year. In

both programs the emphasis is purported to focus on socialization and adjustment to school.

Most teachers who work in the pre-school program are former kindergarten or primary grade teachers. Their training was in the field of elementary education and neither child development courses nor the philosophy of the nursery school were emphasized. Curriculum offerings of this kind are usually found in home economics departments rather than education departments. Generally the teachers who worked in the pre-school program were enthusiastic and felt the program had merit.

Although parents were always welcome to visit the school, no efforts were made to solicit their participation nor to involve them in the pre-school program. Theoretically the community school program, however, does offer activities which would attract the parent to school.

Effects of Pre-School Attendance on Social Growth

Pre-school attendance usually affords the child his first significant peer group contact. Some of the responses learned at home may be reinforced while others are likely to be punished by peers and/or teachers. It might be anticipated that the child's social behavior may be changed as a consequence of this experience, and this is one of the goals of pre-school training programs.

Early studies in the area of social growth were made by Ezekiel[20] (1930), Walsh[21] (1931), Hattwick[22] (1936), Andrus and Horwitz[23] (1938), and Joel[24] (1939).

Allen and Masling[25] (1957), reported better social adjustment following pre-kindergarten attendance. They gave a battery of five sociometric questions to 116 children: thirty-four with pre-school experience, and eighty-two without this background. The two groups were equated in terms of scores on the Vineland Social Maturity Scale, extent of parents' education, age and sex. Although the occupations of the fathers of nursery school participants had more prestige than parents of the other subjects, the data revealed no relation-

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[20]Ezekiel, op. cit., pp. 74-75.

[21]Mary E. Walsh, "The Relationship of Nursery School Training to the Development of Certain Personality Traits, "Child Development, II (March-December, 1931), 72-73.

[22]Betta W. Hattwick, "The Influence of Nursery School Attendance Upon the Behavior and Personality of the Pre-School Child, "Journal of Experimental Education, V, No. 4 (May, 1937), 260-264.

[23]Ruth Andrus and E. L. Horwitz, "The Effect of Nursery School Training: Insecurity Feelings, "Child Development, IX, No. 2 (September, 1938), 169-174.

[24]Walther Joel, "Behavior Maturity of Children of Nursery School Age," Child Development, VII-VIII, No. 3 (September, 1936), 189-200.

[25]Gregory B. Allen and J. M. Masling, "An Evaluation of the Effects of Nursery School Training on Children in the Kindergarten, First and Second Grades, "Journal of Educational Research, LI, No. 4 (December, 1957), 285-296.

ships between fathers' occupation and near-sociometric choices received. Computations on the five questions in each of three grades showed that the group with pre-school attendance received the higher mean score in fourteen out of fifteen comparisons. Differences between the two groups were not statistically significant either in kindergarten or first grade. Significant differences, however, were recorded in grade two. Nursery school participants were seen by classmates as having more prestige, being more spontaneous and more intelligent.

Vitz[26] (1961) based his conclusions on observations of the same children over a period of time. He examined "grown-up" behavior. This was defined as taking an adult role in any way; e. g., playing mother or father. giving advice in an adult manner, comforting another child. Results indicated that anti-social aggression steadily decreased from the second to the eighth and final week. During the second week of school anti-social aggression was observed 8.9 per cent of the time. The final week this figure was 5.6 per cent. "Grown-up" behavior steadily increased from 13.5 per cent to 18.5 per cent.

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[26]P. Vitz, "Some Changes in Behavior of Nursery School Children Over a Period of Seven Weeks," Journal of Nursery School Education. XVI. No. 1 (January, 1961), 62-65.

Studies by Bonney and Nicholson[27] (1958), and Brown and Hunt[28] (1961), did not find that pre-school attendance made any difference in social growth. The former study replicated an earlier study of the effects of pre-school experience on children in later life. Former nursery school pupils who were in kindergarten, first, second or third grade were studied. Findings concluded that sociometric scores of former nursery school pupils were significant at the .02 level. The second study used 402 children in grades one - six in a lower middle class neighborhood who had attended a nursery school and/or a kindergarten. None of the differences between children who had and had not attended nursery school were found to be significant either on the basis of the sociometric technique or on the basis of teacher evaluation. The third study in this series used four classes of sixth graders and reported the same results as the previous study. The authors suggested that the quality of the pre-school program may be an important factor in producing differences between children who had attended pre-kindergarten and those who had not.

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[27]Merle E. Bonney and Ertie L. Nicholson, "Comparative School Adjustments of Elementary School Pupils With and Without Pre-School Training," Child Development, XXIX, No. 1 (March, 1958), 125-133.

[28]A. Brown and R. Hunt, "Relations Between Nursery School Attendance and Teachers' Ratings," Child Development, IX, No. 3 (September, 1938), 293-302.

Kirk's study[29] (1958) focused on mentally retarded children. Using the California Test of Personality, his findings were that children with pre-school experiences were superior in social skills to those without. They had better peer relations during play, were rated by teachers as more socially mature, and were given more positive social choices more often on sociometric tests by peers.

Several factors may be responsible for producing differences in the studies cited: differences in training and experience of teachers doing the rating, differences in the later school environment in which the child was observed, and the wide variety of behaviors used by different investigators as measures of social adjustment. Other variables include the home atmosphere and the environment of the nursery school.

Schwertfeger and Weikert[30] attribute the paucity of studies on the social growth of pre-school children to: (1) the availability of suitable instruments (usually these are more suited to older children or adults), (2) the disagreement among experts as to what constitutes ideal social behavior, and (3) the difficulty involved in isolating critical experiences within the school's

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[29]S. A. Kirk, Early Education of the Mentally Retarded (Urbana: University of Illinois Press, 1958).

[30]Jane Schwertfeger and D. Weikert, "The Nature of Pre-School Benefits," Michigan Education Association Journal, XLIV, No. 25 (March, 1967), 18-34.

jurisdiction. The development of a non-verbal instrument would be of great value.

Child development researchers allege that social interaction among children increases rapidly after the age of three, that prior to this time children lack both the readiness and social experience. Social development during the pre-school years reflects the child's expanding world. From a close tie to his mother, he expands his relationship to include other members of the family, his peer group, and finally other adults. Many factors determine the child's social behavior and development. Although it seems reasonable to conclude that pre-kindergarten attendance strengthens important social skills and behaviors, on the basis of information now available, it is not possible to make unequivocal assertions.

Effects of Pre-School Attendance on Emotional Development

Studies of the emotional development of pre-school children have used both positive and negative approaches. Some researchers have attempted to determine the positive benefits derived from pre-kindergarten experiences, while others have tried to determine possible deleterious effects. Much of the latter research has come from studies of institutionalized children who have been separated from their parents. Some practitioners have expressed the fear that negative effects of this kind of experience might also result when the child is

separated from his mother to attend nursery school.

Heinicke[31] (1956) compared the behavior of two groups of two-year olds during the period of their first separation from parents. One group of children was placed in a residential nursery situation, the other group in a day nursery. Initially both groups were disturbed over the separation, particularly during the first two days. After this the children in the day nursery showed less concern, while the other group continued to show significantly greater disturbance in a number of areas. When returned to parents after three weeks the latter group displayed severe hostility, demanded a disparate amount of adult attention, increased autoerotic behavior, and some refused to recognize parents. These observations of children in residential programs are consistent with other reports of children who have been institutionalized.

Glass[32] (1949) studied children two through five years old who attended pre-school while their mothers worked. They were compared with a control group cared for by mothers at home with respect to eating, sleeping, elimination habits and the incidence of problem children. Findings indicated

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[31]C. M. Heinicke, "Some Effects of Separating Two Year Olds from Their Parents, A Comparative Study," Human Relations, IX (1959) 105-176.

[32]Netta Glass, "Eating, Sleeping and Elimination Habits in Children Attending Day Nurseries and Children Cared For At Home by Mothers," American Journal of Orthpsychiatry, XIX, No. 4 (October, 1949) 697-711.

only slight differences between the two groups and the author concluded that there was no evidence to suggest that children in nursery school are more likely to develop emotional problems than children cared for by their mothers.

The likelihood that children at the pre-school level can learn to deal with their emotional problems has been indicated by studies conducted in clinical and educational settings. Chittenden[33] (1942) found that a selected group of nursery school children showed a decrease in dominative behavior without becoming more inactive or subdued after a training series in which they had a chance to study what happened when dolls used quarrelsome and cooperative methods of handling social problems such as those that arise in the young child's play. Appel[34] (1942) found that a successful technique in dealing with fights and quarrels of nursery school children was to try to interpret the wishes and feelings exhibited. Since 1956, the Virginia Frank Child Development Center in Chicago has worked with emotionally disturbed pre-school children. Using nursery school activities, trained teachers and social workers attempt to help children cultivate inner resources for responding to frustrations. Work at the

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[33]G. E. Chittenden, "An Experimental Study in Measuring and Modifying Assertive Behavior in Young Children," Child Development, VII. (Monograph.)

[34]M. H. Appel, "Aggressive Behavior of Nursery School Children and Adult Procedures in Dealing With Such Behavior," Journal of Experimental Education, IX, No. 2 (September, 1942), 185-199.

Center is described in an article entitled, "Problem Pre-Schoolers."[35] Such research indicates that the pre-school child probably has a greater capacity for understanding and using psychology than customarily is assumed in connection with training at school. No indication is given, however, as to how early and how well the child might learn to bring reason to bear in understanding his own emotional behavior.

With the expansion of the child's mental operations, motor abilities and social activities, circumstances which arouse his emotion become more and more complex. It becomes more difficult to understand his feelings, and when he shows emotion, the cause may not be understood.

Emotional development is always an individual matter. No two children ever react in exactly the same manner or make the same response to the same environmental situation. Factors which influence responses include their temperament, past experiences, and primary reactivity pattern.[36]

One of the most difficult areas for research and accurate measurement is the study of emotional development. Perhaps the most considerable amount of research conducted has used the Children's Manifest Anxiety Scale. It can be used upward from the second grade. Generally studies show that anxiety

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[35]Edith G. Neisser, "Problem Pre-Schoolers," Parent's Magazine, XLI, No. 1 (March, 1966), 43-45.

[36]Dinkmeyer, op. cit., p. 265.

interferes with performance,[37] although some studies indicated that under certain conditions anxiety facilitated early identification of emotionally disturbed children. In a research project in California, Bowers[38] found ten per cent of a group of fourth, fifth, and sixth grade children to be moderately to seriously emotionally handicapped. He used a method based on teacher ratings, peer perceptions and self-perception for in-school screening by teachers.

Good mental health is dependent on wholesome emotional development. The goals of early childhood education include promotion of the child's sense of security, self-respect, and other concomitants included in this dimension of personality. The school environment must provide a supportive climate which nurtures individual differences and enhances self-concept. The child must feel respected and valued.

> . . . it is not the overt behavior we seek to change but the child's goals and purposes. This necessitates providing a consistent relationship of mutual trust and mutual respect to enhance development.[39]

Readiness and Pre-School Attendance.

The term "readiness" is not found in educational literature prior to

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[37]Ibid., p. 271.

[38]E. M. Bowers, Early Identification of Emotionally Disturbed Children in School (Springfield, Illinois: C. C. Thomas, 1960).

[39]Ibid., p. 275.

1935. However, some contemporary educational psychologists allege that Pestalozzi had this concept in mind when he wrote:

> All instruction of man is then only the Art of helping nature to develop her own way; and this Art rests essentially on the relation and harmony between the impressions received by the child and the exact degree of his developed powers. It is also necessary in the impressions that are brought to the child by instruction that there should be a sequence, so that beginning and progress should keep pace with the beginning and progress of the powers to be developed in the child.[40]

The term is used by educators to indicate the time when a child is sufficiently advanced mentally, socially, emotionally, and physically, to learn.

Much research within the last decade on the effects of pre-kindergarten attendance on readiness was undertaken by Brenner, the author of the instrument used in this study. Brenner[41] (1957), Brenner and Samuelson[42] (1959), and Hoffman[43] (1957, 1958), have isolated characteristics of kindergarten pupils which purport to indicate readiness for first grade. The Brenner-Samuelson study examined early kindergarten behavior in relation to first grade

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[40]Lewis F. Anderson, "How Gertrude Teaches Her Children," Pestalozzi (New York: McGraw Hill Book Company, Inc., 1931), pp. 57-58.

[41]Anton Brenner, "Nature and Meaning of Readiness for School," Merrill-Palmer Quarterly, III, No. 3 (Spring, 1957).

[42]Anton Brenner and Nancy Samuelson, "Kindergarten Behavior and First Grade Achievement: A Case Study Exploration," Merrill-Palmer Quarterly, V, No. 3 (Spring, 1957), 140.

[43]Helmut Hoffman, 'Behavior Patterns in Kindergarten and First Grade," Merrill-Palmer Quarterly, III, No. 3 (Spring, 1957), 136.

achievement. Sixteen children in a private school were ranked by their first grade teacher in terms of functioning in first grade and preparedness for second grade. The five most successful and five least successful children were chosen for case study analysis. The ten children were described in their transactions with objects, verbal symbols, peers, teachers, and adults. Following a six week observation period, the researchers generalized about different styles of child-school relationships that are characteristic of children who are likely to be successful in first grade and of children who are likely to be less successful.

A study by Wolff[44] in 1965 compared children in four elementary schools who had participated in a Head Start program with classmates who had not. Using the Caldwell Pre-School Inventory, four measures of social and educational readiness were compared: initial adjustment to class and school routines, behavior toward peers and teachers, speech, work habits and listening habits, and educational attainment. Head Start participants tended to rank high in greater proportions than did the children without this experience. They appeared less frequently at the bottom three deciles than did children who had participated in Head Start. Teachers who had fewer than twenty-five per cent Head Start children in their classes thought the program made no difference. In classes where Head Start participants constituted

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[44]Max Wolff and Annie Stein, "Head Start Six Months Later," Phi Delta Kappan, XLVIII, No. 7 (March, 1967), 349-350.

fifty per cent or more of the class, teachers thought the pre-school attendance helped the child's initial adjustment.

Henderson[45] (1965), Kirk[46] (1958), and Weikert[47] (1964), found no statistically significant differences between control and experimental groups on reading readiness at the end of kindergarten. Weikart does suggest, however, that after pre-school exposure the disadvantaged child is "More ready to learn and participate in an educational experience."[48] Vandeberg[49] posited that all aspects of language arts, not only reading, need attention in readiness programs. Activities described as essential for language arts readiness were: developing favorable attitude toward the language activities; providing wide experiences which are fundamental to understanding primary grade learnings; extending concepts through teaching children to classify familiar objects; improving oral

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[45]A. S. Henderson, "1964-1965 Annual Report To the Ford Foundation On the Pre-School and Primary Education Project," Council for Human Services (Harrisburg, Pennsylvania, 1965). (Mimeographed.)

[46]Kirk, op. cit.

[47]Weikert, op. cit.

[48]Gerald D. Alpern, "The Failure of a Nursery School Enrichment Program for Culturally Disadvantaged Children," American Journal of Orthopsychiatry, XXXVI, No. 2 (March, 1966), 244-245.

[49]Ethyl Vandeberg, "Readiness for Language Arts Begins In Kindergarten," Elementary School Journal, LIII, No. 8 (April, 1953), 447-453.

language facility, auditory and visual discrimination. Artley[50] cited twenty-five studies that support using language arts programs to foster readiness.

Koenker's[51] study demonstrated the effectiveness of a kindergarten arithmetic readiness program. Two elementary schools with morning and afternoon kindergarten sections were used. Experimental and control groups were set up. In the fall an intellegence test and an individual arithmetic readiness test were administered to all pupils. During the year the experimental group studied the regular program plus an arithmetic readiness program which included number experiences in life-like classroom activities, (examples: measuring heights, room dimensions, with ruler and yardstick; using money). Retesting done in the spring showed that the experimental group gained significantly more in arithmetic than those in the control group.

Alpern's[52] research reports the failure of a nursery school enrichment program for culturally disadvantaged children. Forty-two four-year old children typical of this population were individually tested by eight psychologists for intelligence (Stanford-Binet Intelligence Scale), and three aspects of readiness

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[50]A. Sterl Artley, "Oral Language Growth and Reading Ability," Elementary School Journal, LIII, No. 6 (February, 1963), 321-358.

[51]Robert H. Koenker, "Arithmetic Readiness at The Kindergarten Level," Journal of Educational Research, XLII, No. 3 (November, 1948), 218-223.

[52]Alpern, op. cit.

(first three scales of Metropolitan Readiness Tests, Form K). On the basis of the initial testing two groups were matched on the basis of sex, intelligence and readiness. One group was assigned at random as the experimental group (E), and the other as the control group (C). The E group attended a nursery school three times a week over a seven month period. The curriculum was purported to be designed specifically to: (1) increase language skills; (2) develop positive attitudes toward concepts of teacher, learning and school, and (3) increase knowledge of middle class values and experience. Upon termination of the program, all children originally tested who were available were retested by seven psychologists. Statistical analysis of data indicated: (1) no difference in intelligence between groups at the time of the initial or second testing; (2) both groups made significant gains in all three-readiness measures from the initial to the second testing, and (3) there were no significant differences between groups in any of the readiness tests. Further analysis of group differences is scheduled to take place after all pupils have completed at least one year of elementary schooling.

Summary

Literature in the field of child development generally concludes that the pre-school years are the most opportune time for intervention if behavioral and attitudinal changes are to be made. Abundant evidence makes it clear that a

child's early social growth and emotional development influence his later life.

Almost daily new research and papers on the disadvantaged child appear. In several instances the writer found that although she was able to ascertain information about studies, actual research was not available. Based on the review of literature it must be concluded that the effects of pre-school attendance on social growth, emotional development and readiness remain moot issues. Limited evidence suggested that certain social skills may be enhanced by a good pre-kindergarten experience. Some studies asserted that emotional development and readiness were facilitated by pre-school attendance; others made no such claims.

The research makes it clear that the effectiveness of pre-school efforts depend on whether or not the program is appropriate to the child's readiness level. Crucial to the whole program is the effectiveness of the teacher. A wide range of behaviors is reported, and teachers vary both in methods used and degree of support given to the child.

Behavior learned in the pre-school years tends to persist throughout childhood. A longitudinal study made by Kogan and Moss[53] verifies this fact. Thus the important role that pre-school programs can play is under scored during this period of growth and development. It is not yet possible to document

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[53]Jerome Kogan and Howard Moss, Birth to Maturity: A Study In Psychological Development (New York: Wiley and Son, 1962)

conclusively the impact of pre-kindergarten education. However, research would lead one to conclude that under certain circumstances, positive effects can result.

> The time for pre-school experiment is doubly right. That it is needed for the sake of the excluded and deprived is self-evident; but the movement is gathering momentum at offering persuasive evidence that all children can learn - much more, much sooner. What has been introduced as a lifesaving device for those at the bottom of society's ladder may, in time, help to loosen the rigidity of the educational structure as a whole.[54]

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[54]Hechinger, op. cit., p. 12

CHAPTER III

PROCEDURES OF THE STUDY

Methods of Investigation

Selection of the Study Site. In considering possible sites for the study, the writer investigated school districts in and around Flint, Michigan. The use of several school districts in the area was studied. Because of differences in the size and complexion of communities, curriculum construction and school organization it seemed unwise to elect this alternative.

It was deemed more appropriate to use one school district. This decision eliminated differences attributable to varying practices among school districts. The following criteria were used in selecting the school system in this study:

1. Pre-school programs of varying lengths in operation in areas labelled "disadvantaged."
2. Sufficient population in each program to draw matched groups of children from disadvantaged homes.
3. Cooperation of school administrators, teachers, and pupils.
4. Accessibility of study site to the investigator.

The Flint Community School District was selected as the site for the

study. The community and schools met all necessary criteria.

Since pre-school education composes one of the six major segments of compensatory education programs in the Flint Schools, the Research Department felt that this study would evaluate some aspects of this program and help to answer questions concerning it. The compensatory program of the Flint Public Schools entitled, "Better Tomorrow for the Urban Child" (BTU), is described in Appendix A.

The Community. Flint, the second largest city in Michigan, is located in the southeastern part of the state, approximately sixty miles northwest of Detroit, and fifty miles northeast of Lansing. It is the home of Buick Motor Car Company and AC Spark Plug, as well as the major assembly plants of Chevrolet and Fisher Body companies. Many other factories that serve heavy industry are also located here.

Originally incorporated as a city in 1855, Flint has a population of about 200,000. Approximately 82,000 of these residents are employed by General Motors. The city occupies an area of thirty-three square miles.

The area which includes the inner-city schools from the middle to the north end of the community covers some seventy-five blocks. See Appendix B for the location of these schools in the city.

Selection of Schools. Thirteen elementary schools are located in this area. Some of them offered eight week summer pre-kindergarten programs; others had full year programs. The type of programs offered in each of these

schools is illustrated graphically in Table 2.

TABLE 2

PRE-KINDERGARTEN PROGRAMS IN FLINT
INNER-CITY ELEMENTARY SCHOOLS

School	Full Year Program	Head Start (Summer Program)
1	X	
2		
3	X	X
4		
5	X	
6	X	X
7		
8		
9	X	X
10	X	X
11		
12	X	
13	X	X
TOTALS 13	8	5

Five inner-city elementary schools operated summer Head Start pre-school projects. Eight schools provided full year (nine month) pre-kindergarten programs. Since none of the schools enrolled a sufficient number of children in both programs from which an adequate sample could be drawn, three schools were selected at random.

These three schools are in the old part of the city; they represent the

hard core of scholastic underachievement, and typify the myriad of problems characteristic of urban depressed areas.

Building Characteristics. Sexton[1] reports that school building in underprivileged neighborhoods are poorer; that they have less equipment and poorer standards of maintenance. Observations by the investigator would confirm this statement. There are, however, many reasons. The buildings were old. The mean age of the schools in this study was forty-four years. The buildings were well worn and maintenance becomes difficult as indicated by chipped and cracked plaster and peeling paint. The schools were crowded. All of the schools included in this study had at least three portable classrooms.

TABLE 3

SCHOOL BUILDINGS BY YEAR OF CONSTRUCTION, AGE, AND PORTABLE UNITS

School	Year of Original Construction	Age	Portable Classrooms
1	1921	46	7
2	1918	49	3
3	1926	41	4

[1]Patricia Cayo Sexton, Education and Income (New York: The Viking Press, 1961).

The Students. Enrollment in these buildings approximates 2150 pupils; almost all pupils are Negro. Although no census of racial composition is recorded in the Flint Schools, the following table represents an estimate arrived at through consensus by several observers in these schools.

TABLE 4

STUDENT ENROLLMENT AND RACIAL COMPOSITION OF SCHOOLS IN THE STUDY

School	Enrollment	Percent of Students by Race	
		Negro	Caucasian
1	1100	98	02
2	500	100	0
3	550	98	02
TOTAL	2150	(more than) 98	(less than) 02

The Staff. Each school was staffed with a complement of professional educators, including the principal, reading specialists, arithmetic specialists, a social worker, a community school director, home counselor, and an instructional materials specialist. In addition, all consultant and diagnostic services of the Flint Board of Education were available.

Selection of Pupils. Pupils in the kindergartens of the three selected schools were classified according to the extent of their pre-kindergarten experiences. Those who had attended the full year program were placed in Group I;

those who had participated in the eight week Head Start Project were in Group II; and those who had not participated in any pre-kindergarten experience were in Group III. The Research Office of the Flint Community Schools, kindergarten teachers and office records were used to classify pupils during September, 1966.

From these lists, ninety pupils were selected for the study, thirty from each of the three groups. Pupils were matched using the following criteria: (1) birthdate (born in same month and year), (2) birthplace (all were born in Flint), (3) sex, and (4) race (Negro). Birthdate and sex were chosen in an attempt to reduce variability within the populations. Children of the same age tend to be ready for similar experiences at the same time.[2] However, research indicates that girls mature more rapidly than boys.[3] Lee's study[4] suggested the variable of birthplace. He found that intelligence test scores improved significantly and steadily with length of residence in a northern city (Philadelphia). Thus, to eliminate the possibility of regional handicaps, this was included as a control variable. Racial matching was coincidental. Due to the segregated housing pattern that existed in Flint, elementary schools in the inner-city enrolled an overwhelming majority of Negro students. In Table 5, the population of the study is described

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[2]Olson, op. cit.

[3]Cronbach, op. cit.

[4]E. S. Lee, "Negro Intelligence and Selective Migration," American Sociology Review, XVI, No. 2 (March, 1951) 227-233.

by the control variables of the study.

TABLE 5

AGE AND SEX OF NINETY NEGRO KINDERGARTEN CHILDREN BY EXPERIMENTAL GROUPS

Experimental Group	Sex	Age in Years and Months										Total
		5	5-1	5-2	5-3	5-4	5-5	5-6	5-8	5-9	5-10	
Group I	male	1	2		1		2	3	1	1	1	12
	female		3	2	3	2	1	2	3		2	18
	total	1	5	2	4	2	3	5	4	1	3	30
Group II	male		1	3	1	1		2	2	1	1	12
	female	2	3	3				4	2	1	1	18
	total	2	4	6	1	1		6	4	2	2	30
Group III	male	1		1	1	2	2	3	1	1		12
	female		1	2	2	1	3	2	3	2	2	18
	total	1	1	3	3	3	5	5	4	3	2	30
TOTAL	male	2	3	4	3	3	4	8	4	3	2	36
	female	2	7	7	5	5	4	8	8	3	5	54
	total	4	10	11	8	8	8	16	12	6	7	90

Included in the study population were thirty-six boys and fifty-four girls ranging in age from five years to five years ten months old. Each experimental group had twelve males and eighteen females. Three boys were eliminated from the study. One child was hurt in an accident and one moved during the year.

The third member of the group was dropped as counterparts were no longer available. Complete data was gathered from eighty-seven pupils.

Collection of the Data

Instruments were selected that would measure the specific variables of the study. Test instruments used in the study were: The Anton Brenner Developmental Gestalt Test of School Readiness, the Metropolitan Readiness Tests Form A, and The Operation Head Start Behavior Inventory.

The Anton Brenner Developmental Gestalt Test of School Readiness. This instrument is an elaboration of principles of Gestalt and development psychology. The basic principles posit that perceptual and conceptual differentiating ability are the most important factors in personality development and learning from the time of birth. Five sub-tests are included which require one or more perceptual responses.

Sub-test I:	Number producing
Sub-test II:	Number recognition
Sub-test III:	Ten dot Gestalt
Sub-test IV:	Sentence Gestalt
Sub-test V:	Draw-a-man

The test is primarily non-verbal and purports to "tap the potentials of culturally deprived children with language difficulties." Administration takes approximately 4-8 minutes for each child.

A simple numerical scoring system is used. Test scores have various meanings depending on when the test was administered. Brenner Gestalt Test scores are interpreted differently if testing occurs during the first part of the

kindergarten experience, or toward the end of that period. Low scores (0-24 in October, 0-54 in May) suggest that the child is maladjusted to school and is unready. Probably they are also unhappy. High scores (55-80 in October, 70-80 in May) may indicate a rapidly and early maturing, well-adjusted child.

The Achievement-Ability sub-scale was completed by the teacher. Eight items were assessed: persistence, independence, thinking ability, reading and number achievement, motor coordination, method of working, and environmental adjustment. This rating evaluated functional ability at the time and was predictive of potential performance.

The Social-Emotional Behavior Scale was also completed by the teacher. Categories included were: considerateness, dependability, self-confidence, emotionality, interest in learning, motivation, and cooperation. This scale provided insights into several aspects of the child's personality composition.

Perceptual and conceptual differentiation have been found to correlate highly with social and emotional behavior in school situations. Consequently the Brenner Gestalt Test in addition to being predictive of reading and number readiness may be considered as a measure of general social readiness, and predictive, to some extent, of future success or failure in situations involving social and emotional behavior.

Studies of reliability and validity have included all socio-economic strata. Studies indicate that the Brenner Gestalt and its sub-tests have significantly high reliabilities. Accuracy of discrimination and prediction of the test

was examined through the use of two different criteria measures. The range of accurate predictions on the Achievement-Ability Scale and the Social-Emotional Behavior Scale were from sixty-one to ninety-three per cent.

Norms are based on Michigan kindergarten pupils with an age range from four years nine months through six years, ten months.

The rationale for this instrument as stated by the author posits:

> Life, growth, development, maturation, personality formation and readiness for tasks are characterized by continuous formation and change of forms and structures (Gestalten) in the self and of the external milieu. These processes occur during the entire life cycle of an individual. There is constant interaction between an organism and its environment. Through such processes sensory organs develop and increase their functionality; so do thinking, emotionality, social behavior, needs, interests, experiences, values, and abilities to cope with reality and the tasks of living. These processes and experiences lead to increasing differentiations within the organism. The increase of organismic structure and differentiation modifies and improves organismic functions; it heightens the capacity for input and output --- learning and performing. This occurs in the child's physical, mental, emotional and social development as well as in specific skills and achievements.[5]

A copy of the Brenner Gestalt Test is found in Appendix C.

The Metropolitan Readiness Tests. Designed for use at the end of kindergarten or the beginning of first grade, these tests measured the extent to

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[5]Anton Brenner, The Anton Brenner Developmental Gestalt Test of School Readiness Manual, Department of Education and Psychology (Detroit Michigan: The Merrill-Palmer Institute, 1964), p. 6.

which school beginners have developed in several skills and abilities that contribute to readiness for first grade instruction. Six tests are included which sample traits, knowledge and skills that are important to success in handling the formal instruction of the typical first grade program. The sub-tests are as follows:

Test I : Word Meaning - range of vocabulary and verbal concepts.

Test II : Listening - comprehension of phrases and sentences, sustained attention, capacity for inference.

Test III : Matching - visual perception of similarities and differences in word forms and figures.

Test IV : Numbers - number maturity - vocabulary, counting, recognition of written numerals, interpreting number symbols, simple numerical problems.

Test VI : Copying - a combination of visual perception and motor control that is important in learning to write.

Scoring required comparison of the pupil's responses with the correct responses marked on a key. Total scores may be converted to a percentile rank or to a letter rating from A to E. This is the simplest mode of interpretation of scores, and the one most widely used. Table 6 describes the scale.

TABLE 6

LETTER RATINGS AND READINESS STATUS CORRESPONDING TO VARIOUS RANGES OF TOTAL SCORES

Score Range	Letter Rating	Readiness Status	Significance
Above 76	A	Superior	Apparently well equipped for first grade work. Enriched opportunities should be offered in line with abilities indicate.
64-76	B	High Normal	Good prospects for success in first grade work provided other indications, such as health, emotional factors etc., are consistent.
45-63	C	Average	Likely to succeed in first grade work. Careful study should be made of specific strengths and weaknesses and instruction planned accordingly.
24-44	D	Low Normal	Likely to have difficulty should be assigned to slow section and given more individualized help.
Below 24	E	Low	Chances of difficulty high under ordinary instructional circumstances. Further readiness work, assignment to slow sections or individualized work is essential.

The manual pointed out that efforts to attach significance to sub-test scores were not encouraged. Consequently, only the total test scores were used

in this study.

The Metropolitan Readiness Test was standardized on a socio-economic group which may have been slightly superior to the national average with respect to median income and average schooling of adults in the communities. However, the effect of such selection was not believed to be of sufficient magnitude so as to impair the norms' usefulness. The test is believed to be both valid and reliable. A copy of this instrument may be found in Appendix D.

Operation Head Start Behavior Inventory. This inventory consisted of fifty items divided into nine categories. Within each category the items were evenly divided between positive and negative attributes. Each item was rated on a four point scale from "very much like the child" to "not at all like the child." Two sets of scores can be derived from this instrument: (1) an overall adjustment score, (2) a separate adjustment score for each behavioral category. The nine behavior categories included in this instrument were: sociability, independence, curiosity, persistence, emotionability, self-confidence, jealousy, achievements, and leadership. This instrument was developed by the Research Division of the Office of Economic Opporutnity. The Operation Head Start Behavior Inventory was widely used throughout the United States to evaluate children in Head Start programs. At the time this report was being written, the Michigan State University Head Start Research and Evaluation Center had in its possession about 150 of these inventories to be scored. The Center expeced to have data completed by the end

of the summer, 1967. The comments from the personnel there who had worked with this instrument were generally unfavorable. The Assistant Director of the Center remarked that several statements seemed ambigious and some of the terms used could evoke wide interpretation. The writer concurs. Information regarding norms and standardization were not available. A copy of the instrument is found in Appendix E.

Administration of Test Instruments. The Brenner Gestalt Test was administered during the first two weeks of October, 1966, to all pupils included in the study population in individual testing situations at the pupils' respective schools. At each school a quiet, non-distracting setting was provided. All of the testing was done by the investigator.

At this time the investigator asked kindergarten teachers to complete the Achievement-Ability Scale and the Social-Emotional Behavior Scale. They were completed by teachers during the last two weeks in October. All data required by and related to the Brenner Gestalt Test were completed by October 30.

Between May 17-29, of the ensuing year, the Brenner Gestalt Test was administered individually to sixty pupils who were selected at random from the total study population. Table 7 describes this group. Again teachers were asked to assess pupils on the Achievement-Ability Scale and the Social-Emotional Behavior Scale. Data were returned to the investigator by June 2.

TABLE 7

AGE AND SEX OF SIXTY NEGRO KINDERGARTEN CHILDREN BY EXPERIMENTAL GROUPS (POST-TEST)

Experimental Group	Sex	Age in Years and Months									Total
		5-0	5-1	5-2	5-3	5-4	5-6	5-8	5-9	5-10	
Group I	male		2	1	1	2	1	1			8
	female	1	1	2	1		2	1	2	2	12
	total	1	3	3	2	2	3	2	2	2	20
Group II	male	1		1	2	1	1	1	1		8
	female	2	1	1		2	1	2	1	2	12
	total	3	1	2	2	3	2	3	2	2	20
Group III	male	1	1	1		1	1	1	1	1	8
	female	1	1	1	1	3		2	3		12
	total	2	2	2	1	4	1	3	4	1	20
TOTAL	male	2	3	3	3	4	3	3	2	1	24
	female	4	3	4	2	5	3	5	6	4	36
	total	6	6	7	5	9	6	8	8	5	60

Each year in the Flint Public Schools kindergarten teachers in each school administer the Metropolitan Readiness Tests to all pupils. The instrument was administered during the second and third weeks of May at the schools included in this study. Results were made available to the investigator. Teachers reported that pupils were tested in groups of ten as per instructions from the Flint Research Office.

The Operation Head Start Behavior Inventory was completed by kindergarten teachers during May, 1967.

Statistical Analysis

The Kruskal Wallis One Way Analysis of Variance.[6] This statistical method was used for analyzing data from the Brenner Gestalt Test, Metropolitian Readiness Test, and the Operation Head Start Behavior Inventory.

The Kruskal Wallis is a nonparametric statistic. It tests the null hypothesis that k samples (number of) come from the same or identical population with respect to averages. It assumes that the variables under consideration have an underlying and continuous distribution.

In the computation of the Kruskal Wallis Test, each of the N (number of cases in all samples combined) observations are replaced by ranks. That is, all the scores from all the k samples (number of samples) combined are ranked in a single series. The smallest score is replaced by rank 1, the next by rank 2, and the largest by rank N. N = the total number of independent observations in the k samples.

When this has been done, the sum of the ranks in each sample (column) is found. The Kruskal Wallis test determines whether these sums of ranks are

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[6]Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw Hill Book Company, Inc., 1956), pp. 184-193.

so disparate that they are not likely to have come from samples which were all drawn from the sam population. If H is true, then the H (statistic used in the Kruskal Wallis Test) is distributed as chi square with df=k-1, if size of samples exceeds 5.

When compared with the powerful parametric F test, under conditions where assumptions associated with the statisitcal model of the F test are met, the Kruskal Wallis has asymptatic efficiency of $\frac{3}{\pi}$ = 95.5 per cent.

The program for this statistical analysis was designed by the Michigan State University Computer Laboratory for the CDC 3600 computer; program 40.02. This program was utilized in this study.

Significance Level Chosen. The five per cent level for acceptance or rejection of the null hypotheses being investigated was selected as being sufficiently rigorous for the conditions of the study. Thus, if the probability was at or less than five times in one hundred that the observed difference or one greater could arise by chance, the hypothesis was rejected; but if the observed difference was of such a magnitude that it or one greater might arise more than five times in one hundred through the operation of chance factors, the null hypothesis of no difference was accepted.

CHAPTER IV

ANALYSIS OF THE DATA

The problem posed in this study was stated in eight hypotheses. Each was analyzed separately and the data presented.

Hypothesis I

There were no significant differences in social growth in October among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

On the Brenner Gestalt Test (BGT) the following categories were interpreted as characteristic of social growth: consideration, dependability, goal direction, and cooperation. Rank sum scores for these dimensions are reported in Table 8.

TABLE 8

BGT RANK SUM SCORES ON SOCIAL GROWTH DIMENSIONS FOR THREE EXPERIMENTAL GROUPS; OCTOBER, 1966

	Sum of Ranks		
	Group I	Group II	Group III
Consideration	1493.5	1104	1230.5
Dependability	1523	1227.5	1077.5
Goal-Direction	1328	1277.5	1222.5
Cooperation	1518.5	1272	1037.5

Rank sums for Group I were higher on all dimensions than were rank sums for the other two groups. Group II's sum of ranks was higher than those of Group III in three categories: dependability, goal-direction, and cooperation. In the category labelled consideration, Group II's sum of ranks was lower than Group III's. Raw scores were lowest for Group III on all dimensions with the exception noted. Dimensions of social growth were analyzed by the H Ratio in Table 9.

TABLE 9

KRUSKAL WALLIS ONE WAY ANALYSIS OF VARIANCE H RATIO ON BGT SOCIAL GROWTH DIMENSION (OCTOBER, 1966) AMONG THREE EXPERIMENTAL GROUPS

Social Growth Scale	Kruskal Wallis H Ratio	Level of Significance
Consideration	4.51	
Dependability	6.22	$<.05$
Goal-Direction	.41	
Cooperation	6.67	$<.05$

Significant differences among the three groups were found at greater than the .05 level on two dimensions of social growth: dependability and cooperation.

The null hypothesis was rejected because significant differences were

found among the three groups on two of the four scales. These differences favored Experimental Group I (full year pre-kindergarten experience) over both Experimental Group II (summer pre-kindergarten program) and Control Group III (no pre-kindergarten education). Further, Experimental Group II scored higher on these two dimensions than Control Group III.

Hypothesis II

> There were no significant differences in social growth in May among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Data gathered in May used two instruments: the BGT, and the Operation Head Start Behavior Inventory (OHBI). The same social growth categories of the BGT tested in Hypothesis I were used. Dimensions included on the OHBI were: independence, achievement, leadership and cooperation. Data regarding social growth dimensions are reported in Tables 10, 11, and 12.

In Table 10, the raw score data showed a consistent pattern. Group I had the highest sum of ranks for all dimensions. Rank sums for Group II were second highest, and Group III scored lowest on all dimensions related to social growth.

A Kruskal Wallis H computed for each social growth category to determine if significant differences existed among the groups was reported in the subsequent Table.

TABLE 10

BGT RANK SUM SCORES ON SOCIAL GROWTH DIMENSIONS FOR THREE EXPERIMENTAL GROUPS; MAY, 1967

	Sum of Ranks		
	Group I	Group II	Group III
Consideration	1444.5	1212.5	1171
Dependability	1434.5	1260	1132.5
Goal-Direction	1339	1269.5	1219.5
Cooperation	1434.5	1261	1132.5

TABLE 11

KRUSKAL WALLIS ONE WAY ANALYSIS OF VARIANCE H RATIO ON BGT SOCIAL GROWTH DIMENSION (MAY, 1967) AMONG THREE EXPERIMENTAL GROUPS

Social Growth Scale	Kruskal Wallis H Ratio	Level of Significance
Consideration	2.46	
Dependability	2.62	
Goal-Direction	.41	
Cooperation	6.61	$<.05$

Cooperation, a dimension on social growth was found to differ

significantly at the .05 level. No significant differences were found for other components of social growth.

Data from the Operation Head Start Behavior Inventory related to social growth are described in Tables 12 and 13.

TABLE 12

OHBI RANK SUM SCORES ON SOCIAL GROWTH DIMENSIONS FOR THREE EXPERIMENTAL GROUPS; MAY, 1967

	Sum of Ranks		
	Group I	Group II	Group III
Independence	1582.5	1291.5	954
Achievement	1524	1175.5	1128.5
Leadership	1456	1141	1231
Cooperation	1584.5	1236.5	1007

Group I had the highest rank sum scores on all dimensions of social growth considered. Rank sum scores for Group II were higher than those for Group III on all items except leadership.

Cooperation, one components of social growth, was measured by both instruments. Comparisons showed rank sum scores were higher for Group I than for the other two groups.

TABLE 13

KRUSKAL WALLIS ONE WAY ANALYSIS OF VARIANCE H RATIO ON OHBI SOCIAL GROWTH DIMENSIONS AMONG THREE EXPERIMENTAL GROUPS

Social Growth Dimensions	Kruskal Wallis H Ratio	Level of Significance
Cooperation	9.18	$<.05$
Independence	10.81	$<.05$
Achievement	5.07	
Leadership	2.93	

Significant differences at the .05 level were found on social growth dimensions of cooperation and independence. No significant differences were found among the three groups on dimensions of achievement and leadership.

The null hypothesis was rejected since significant differences were found among the three experimental groups on two variables in the Operation Head Start Behavior Inventory. The dimension of cooperation was significant at the .05 level on the BGT and the OHBI. Significant differences were found at the .05 level also on the independence variable. No significant differences were found on the following: achievement, leadership, goal-direction, consideration.

Hypothesis III

There were no significant differences in emotional development in

October among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Rank sum scores for dimensions of emotional development of the BGT considered in the study are reported in Table 14.

TABLE 14

BGT RANK SUM SCORES ON EMOTIONAL DEVELOPMENT DIMENSIONS FOR THREE EXPERIMENTAL GROUPS; OCTOBER, 1966

	Sum of Ranks		
	Group I	Group II	Group III
Emotionality	1315	1457.5	1055.5
Self-Confidence	1414.5	1353.5	1060
Interest in Learning	1439	1281	1108
Motivation	1384	1337.5	1106.5

The sum of ranks for Group I was higher on three dimensions (self-confidence, interest in learning, and motivation) than was the sum of ranks for Group II and III on these same items. The sum of ranks for Group II on emotionality was higher than the raw scores for Group I. With the exception noted, the sum of ranks for Group II were second highest. Group III showed the lowest sum of ranks on all dimensions.

TABLE 15

KRUSKAL WALLIS ONE WAY ANALYSIS OF VARIANCE H RATIO ON BGT EMOTIONAL DEVELOPMENT SCALE AMONG THREE EXPERIMENTAL GROUPS

Emotional Development Dimensions	Kruskal Wallis H Ratio	Level of Significance
Emotionality	4.99	
Self-Confidence	4.31	
Interest in Learning	3.37	
Motivation	2.56	

No significant differences existed among the three groups on any dimension of emotional development. The null hypothesis was accepted.

Hypothesis IV

There were no significant differences in emotional development in May among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Rank sum scores for BGT dimensions of emotional development are reported in Table 16.

TABLE 16

BGT RANK SUM SCORES ON EMOTIONAL DEVELOPMENT DIMENSIONS FOR THREE EXPERIMENTAL GROUPS; MAY, 1967

	Sum of Ranks		
	Group I	Group II	Group III
Emotionality	1460	1239	1129
Self-Confidence	1364.5	1272.5	1191
Interest in Learning	1393.5	1259	1175
Motivation	1372.5	1298.5	1159

The sum of ranks was highest in all categories for Group I. Group II scores were higher than those for Group III. The latter group showed the lowest sum of ranks.

TABLE 17

KRUSKAL WALLIS ONE WAY ANALYSIS OF VARIANCE H RATIO ON BGT EMOTIONAL DEVELOPMENT SCALE AMONG THREE EXPERIMENTAL GROUPS

Emotional Development Scale	Kruskal Wallis H Ratio	Level of Significance
Emotionality	3.21	
Self-Confidence	.85	
Interest in Learning	1.37	
Motivation	1.38	

No significant differences existed among the three groups on any dimension of emotional development.

Data from the Operation Head Start Behavior Inventory regarding emotional development were analyzed in Tables 18 and 19.

TABLE 18

OHBI RANK SUM SCORES ON EMOTIONAL DEVELOPMENT FOR THREE EXPERIMENTAL GROUPS

	Sum of Ranks		
	Group I	Group II	Group III
Emotionality	1700.5	1333.5	794
Self-Confidence	1557	1285.5	985.5
Jealousy	1599.5	1312.5	916
Persistence	1731	1104	993
Enthusiasm	1664.5	1206	977

The pattern suggested by the data regarding emotional development was consistent. Group I had the highest sum of ranks in all categories. Group II had the next highest sum of ranks, and Group III the lowest.

Rank sum scores for dimensions of emotionality and self-confidence were higher on the BGT than on the OHBI.

TABLE 19

KRUSKAL WALLIS ONE WAY ANALYSIS OF VARIANCE H RATIO ON OHBI EMOTIONAL DEVELOPMENT DIMENSIONS AMONG THREE EXPERIMENTAL GROUPS

Emotional Development Dimensions	Kruskal Wallis H Ratio	Level of Significance
Emotionality	12.6	.05
Self-Confidence	8.9	.05
Jealousy	12.8	.05
Persistence	16.2	.05
Enthusiasm	12.4	.05

On the OHBI, all dimensions related to emotional development were significant at the .05 level.

Thus one instrument (BGT), reported no significant differences among experimental groups on the dimensions related to emotional development, while the OHBI noted differences at the .05 level on five items: emotionality, self-confidence, jealousy, persistence, and enthusiasm. However, even though the differences among groups on BGT scales were not significant, they were consistent with the scores on the OHBI. Pupils in Group I scored highest, those in Group II second, and those in Group III lowest. The null hypothesis was, therefore, rejected.

Hypothesis V

There were no significant differences in academic readiness in October among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Rank sum scores on academic readiness among the three experimental groups reported by the BGT are in Table 20.

TABLE 20

BGT RANK SUM SCORES ON ACADEMIC READINESS AMONG THREE EXPERIMENTAL GROUPS; OCTOBER, 1966

	Sum of Ranks		
	Group I	Group II	Group III
Academic Readiness	1314.5	1299.5	1214

Raw scores for Group I exceeds those of Group II and III, though the differences among these sums are not great. The H Ratio was, .31 which was not significant.

Hypothesis V was accepted as no significant differences were found among the three groups in October on academic readiness.

Hypothesis VI

There were no significant differences in academic readiness in May

among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Rank sum scores regarding academic readiness among three experimental groups reported by the BGT and the Metropolitan Readiness Tests are in Table 21.

TABLE 21

RANK SUM OF SCORES ON ACADEMIC READINESS FOR THREE EXPERIMENTAL GROUPS ON THE BGT AND METROPOLITAN READINESS TESTS

	Sum of Ranks		
	Group I	Group II	Group III
BGT	1420	1238	1169.5
Metropolitan Readiness	1469	1274.5	1084.5

Group I scored better on both instruments than did Groups II and III. Rank sum scores were very close, however, between the instruments. The H Ratio was 1.87 and 3.99 for the BGT and Metropolitan Readiness Tests, respectively. Neither was significant.

The null hypothesis was accepted as no significant differences in academic readiness existed among the three groups on the BGT or the Metropolitan Readiness Tests.

Hypothesis VII

There were no significant differences in total readiness in October among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Data from the Achievement-Ability scale included in the BGT was used to test the hypothesis. These are reported in Tables 22 and 23.

TABLE 22

BGT RANK SUM SCORES ON TOTAL READINESS AMONG THREE EXPERIMENTAL GROUPS (OCTOBER, 1966)

Achievement-Ability Scale	Sum of Ranks Group I	Group II	Group III
Persistence	1384	1297.5	1146.5
Independence	1473	1380	975
Thinking Ability	1393	1229.5	1205.5
Organization	1436	1176.5	1215.5
Reading Achievement	1339.5	1215	1273.5
Arithmetic Achievement	1411.5	1280	1136.5
Coordination	1384	1207	1237
Adjustment to Environment	1369.5	1291.5	1167

Rank sum scores for Group I were higher in all categories than for Groups II and III. Group II scores were higher than those of Group III on five dimensions: persistence, independence, thinking ability, arithmetic achievement, and adjustment to environment. Group III, however, had higher raw scores on three dimensions of the Achievement Ability Scale than Group II: organization, reading achievement and coordination. Total readiness data were analyzed by the H Ratio and are reported in Table 23.

TABLE 23

KRUSKAL WALLIS ONE WAY ANALYSIS OF VARIANCE H RATIO ON BGT ACHIEVEMENT ABILITY SCALE (OCTOBER, 1966) AMONG THREE EXPERIMENTAL GROUPS

Achievement Ability Scale	Kruskal Wallis H Ratio	Level of Significance
Persistence	1.77	
Independence	8.38	.05
Thinking Ability	1.81	
Organization	3.16	
Reading Achievement	1.57	
Arithmetic Achievement	2.8	
Coordination	1.07	
Adjustment to Environment	1.30	
Total Achievement Ability Scale	.62	
Total BGT	.31	

The dimension of independence was significant at the .05 level. None of the other items, however, showed significant differences. The H Ratio for the total Achievement-Ability Scale and the total BGT were not statistically significant.

Although the three groups differed significantly on one dimension of the Achievement-Ability scale the null hypothesis was accepted. No significant differences in total readiness were found among the three experimental groups, however, on dimensions enumerated above.

Hypothesis VIII

> There were no significant differences in total readiness in May among pupils who participated in a full year pre-kindergarten program, pupils who participated in a summer pre-kindergarten program, and pupils with no pre-kindergarten participation.

Data from the Achievement-Ability scale of the BGT, and total scores from the instrument, were used to analyze this hypothesis. Tables 24 and 25 report these data.

Rank sum scores among the groups were varied on dimensions included on this scale. For Group I the components with the highest rank sums were adjustment to environment and persistence. Highest scores for Group II were on the items of thinking ability and independence. Group III's sum of ranks was highest on items of arithmetic achievement and coordination.

TABLE 24

BGT RANK SUM SCORES ON TOTAL READINESS FOR THREE EXPERIMENTAL GROUPS, MAY, 1967

Achievement-Ability Scale	Sum of Ranks Group I	Group II	Group III
Persistence	1407	1262	1159
Independence	1400	1292	1135
Thinking Ability	1404	1299	1125
Organization	1388	1287.5	1152.5
Reading Achievement	1399	1273	1156
Arithmetic Achievement	1373.5	1254	1200.5
Coordination	1387	1269	1172
Adjustment to Environment	1447	1259	1122

Raw scores presented a consistent pattern with scores for Group I higher than those for Group II and III. Rank sum scores for Group II were higher than those for Group III. On the basis of rank sum scores, only a small spread among the groups is apparent.

Total readiness data were analyzed by the Kruskal Wallis H Ratio and are presented in Table 25.

TABLE 25

KRUSKAL WALLIS ONE WAY ANALYSIS OF VARIANCE H RATIO (MAY, 1967)

Achievement-Ability Scale	Kruskal Wallis H Ratio	Level of Significance
Persistence	1.77	
Independence	2.01	
Thinking Ability	2.28	
Organization	1.61	
Reading Achievement	1.71	
Arithmetic Achievement	.89	
Coordination	1.31	
Adjustment to Environment	3.03	
Total Achievement Ability Scale	2.21	
Total BGT	1.87	

No significant differences were found among the three groups on any dimensions in the Achievement Ability scale. The H Ratio for this total was not statistically significant. On the total BGT the H Ratio was not significant.

For Hypothesis VIII the null hypothesis was accepted as no significant differences existed among the three experimental groups related to total readiness and adjustment.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Compensatory education programs provide neither panaceas nor shibboleths to the problems of disadvantagement. They do, however, offer hope, and the knowledge that resources are being mobilized in an effort to make equality of opportunity a reality for disadvantaged children. The causes of the problem are multiple, likewise the solutions. Pre-school education is viewed as another attempt to solve this dilemma.

> History books of the future will record the sixties as the era when Americans tried very hard to reshape their schools to make educational opportunities more nearly equal. Head Start will probably be recorded as one of the several programs which was at the cutting edge and which helped point the way in this mammoth, heart-warming effort. [1]

Objectives of the Study

The purpose of this study was to compare social growth, emotional development, academic readiness and general readiness (adjustment) of three groups of kindergarten pupils with varying amounts of formal pre-kindergarten experience. One group had participated in a nine month pre-kindergarten program, the second in an eight week summer program (Head Start), while the third had no formal pre-school experience. Eight hypotheses related to the aforementioned variables were tested.

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[1]Brazziel, op. cit., p. 348.

Limits of the Investigation

This investigation was limited to:

1. Three inner-city elementary schools that operated full year and summer pre-kindergarten programs.
2. A matched selected sample of eighty-seven pupils divided into three groups according to the length of pre-school attendance.

Statistical Analysis

The data were analyzed using the Kruskal Wallis One Way Analysis of Variance. Program 40.02 was designed for the CDC 3600 Computer at Michigan State University Computer Laboratory, East Lansing, Michigan.

Summary of Findings

Hypotheses	Conclusion	Dimensions Indicating Significant Difference	Rank of Experimental Groups		
			I	II	III
I - Social Growth (October)	Rejected	Dependability (BGT)*	1	2	3
		Cooperation (BGT)*	1	2	3
II - Social Growth (May)	Rejected	Cooperation (BGT)*	1	2	3
		Cooperation (OHBI)*	1	2	3
		Independence (BGT)*	1	2	3
III - Emotional Development (October)	Accepted		1	2	3

Hypotheses	Conclusion	Dimensions Indicating Significant Difference	Rank of Experimental Groups I	II	III
IV - Emotional Development (May)	Rejected	Emotionality (OHBI)*	1	2	3
		Self-Confidence (OHBI)*	1	2	3
		Jealousy (OHBI)*	1	2	3
		Persistence (OHBI)*	1	2	3
		Enthusiasm (OHBI)*	1	2	3
V - Academic Readiness (October)	Accepted		1	2	3
VI - Academic Readiness (May)	Accepted		1	2	3
VII - Total Readiness (October)	Accepted	Independence (BGT)	1	2	3
VIII - Total Readiness (May)	Accepted		1	2	3

*SIGNIFICANT DIFFERENCE AT .05

Social Growth (Hypotheses I and II)

Significant differences were found among the three groups favoring the group with the longest period of pre-school attendance on several dimensions of social growth: dependability, cooperation and independence. The sum of rank scores favored Group I. Scores for Group II were higher than those for Group III.

Emotional Development (Hypotheses III and IV)

Any conclusion relative to emotional development must be inconclusive. Null Hypothesis III, related to the relationship of the three periods of pre-kindergarten attendance to emotional development in October, was accepted. No differences were found using the BGT. Again the following May, when children were again tested with the BGT, no significant differences were perceived. However, scores on a second instrument which was administered only in May were significantly different, favoring Group I, then Group II over Control Group III.

The dilemma faced by the investigator there was: is it reasonable to expect differences in emotional development among pupils in the three groups to be increased during the kindergarten year? This conclusion must be drawn if one examines only Hypothesis III (differences in emotional development in October not significant) and Hypothesis IV (differences in emotional development in May significant). Null Hypothesis IV was rejected only because of the additional data afforded by the OHBI. Without these additional data, Hypothesis IV, too, would have been accepted and the investigator could have drawn the neat conclusion that no relationship exists between extent of pre-kindergarten school experience and emotional development, but what conclusions might have been drawn if the OHBI had been also administered in October? Perhaps the results would have been dramatically opposite. Perhaps the BGT was not sensitive enough to measure differences in emotional development, and perhaps, the OHBI measured

a different dimension of personality. The results were inconclusive and somewhat contradictory that no defensible conclusion is possible.

Academic Readiness (Hypotheses V and VI)

No significant differences existed among the three groups on reading nor arithmetic readiness. Rank sum scores showed Group I with the highest scores, followed by Groups II and III respectively.

Total Readiness (Hypotheses VII and VIII)

No significant differences were found among the three groups related to total readiness. Rank sum scores reported favored Groups I, II and III in that order.

Conclusions

Within the limitations of this study, the research supported the following conclusions:

1. The length of pre-school attendance was positively related to facilitating some dimensions of social growth (cooperation, independence, and dependability) among disadvantaged children.
2. The length of pre-school attendance was not related to the academic readiness nor total readiness of the groups studied.

3. A consistent pattern emerged from rank sum scores indicating that the duration of pre-kindergarten attendance may be related to the readiness variables though not at a statistically significant level. Differences were in favor of the longest period of attendance.

Implications

Assessments of pre-school programs cannot yet make unequivocal assertions regarding the effects of pre-kindergarten attendance no matter what the duration. To date no studies have reported negative effects, but findings regarding positive effects continue to be inconclusive. It would seem that in view of what is known about the formative years of early childhood, more conclusive findings would be available. Authorities are in general agreement that this period is crucial. During this time the child is malleable and viable. He is at a high level of responsiveness to all kinds of stimuli. Given the position taken by the experts in child development, to give credence to the tenuous research findings, mine and others, is tantamount to admitting that pre-school education programs generally are inadequate and inappropriate for the tasks they purport to accomplish.

The time has come to give serious thought to pre-school education programs. Many are hastily conceived and routinely implemented. Generally they have been patterned after existing kindergarten programs. Thus, in

kindergarten, without regard for the length and quality of his antecedent experience, the child falls heir to a duplication of the program from which he recently emerged. Programs are characterized by a lack of imagination and innovation. Often children do not appear motivated nor challenged. Yet, despite this, teachers continue to engage in traditional patterns and activities.

Teachers trained in nursery school education are, indeed, rare. By their own account, many persons working in pre-school projects are, in fact, unfamiliar with the purposes and goals of early childhood education. This lack of familiarity is reflected in the frequency with which traditional activities and programs are repeated. Administrators who have a background in this field are also rare. As a consequence, often programs are not integrated and articulated with the total educational enterprise. Deutsch, for example, advocates that pre-school programs for the disadvantaged should take children three years of age and continue with them to the end of the third grade, with early childhood centers built into the architectural plans of the school.

Reissman and others have pointed out the importance of parent participation when intervention in the life style of disadvantaged children is planned. Much is known about the environment of the disadvantaged and this information makes imperative the need to involve parents in a meaningful way, if the schools, and for that matter other public agencies, are to have an impact.

Federal, state, and local monies in substantial amounts have been

made available for pre-school programs of varying durations, and the trend is toward increased allocations. However, appropriations of such magnitude are not likely to continue indefinitely unless program evaluations produce more conclusive findings and this seems unlikely unless the content of the programs themselves are made more innovative. Nor can the advocates of pre-school programs for the disadvantaged continue to claim successes when available research evidence is, at best, inconclusive.

In defense of curriculum designers and teachers, however, it should be stated that adequate instruments for measuring specific growth aspects of pre-school children are conspicious in their absence. The development of instruments suitable for use with young children is an enormously difficult undertaking for it must fulfill a complex set of criteria to be of value as measures of readiness, or social and emotional growth. One instrument used in the present research (BGT) has received positive comments from researchers and authorities in the field of child development, while the OHBI, also used in the present research, has not enjoyed this reputation. Critics posit that the statements are ambigious and seem emotionally charged. Since no definitions are included, a broad range of interpretations of the statements is possible. Moreover, the OHBI awaits standardization. Hence, the generally inconclusive findings deriving from this instrument must be discounted, to some unknown degree, until the OHBI is standardized. Even more essential is the development

of a non-verbal instrument since presumably one of the hallmarks of the disadvantaged child is his poorly developed verbal skill.

The research regarding the effects of pre-kindergarten training on social growth done by Allen and Masling[2], and by Vitz[3], do, however, corroborate the findings of the present study. Although neither of these studies, nor the present research demonstrated the occurence of growth as a totality, all produce similar findings as to the facets or aspects of social development in which growth is accruing. Moreover, studies by Glass[4] and Chittenden[5] coincide with findings from this research which hypothesizes that the duration of preschool attendance is not related to emotional development. However, the present study does suggest a growth trend. Several Head Start programs have been evaluated as to how they affected the child's readiness (Henderson,[6] Kirk,[7] and Weikart[8]). As is true in the present study, no significant differences were

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[2]Allen, op. cit.

[3]Vitz, op. cit.

[4]Glass, op. cit.

[5]Chittenden, op. cit.

[6]Henderson, op. cit.

[7]Kirk, op. cit.

[8]Weikart, op. cit.

were reported.

Pre-school education sounds so logical and so promising that few have paused to question its validity. This program alone is not a panacea to the problems of disadvantagement, and hopefully it will not be oversold. The danger of turning this new trend into a fad must be recognized and averted.

Recommendations

Based on the findings in this study, observations, and readings in related literature, the following recommendations are presented as guidelines for further development of pre-school compensatory education programs.

1. A meaningful curriculum should be developed which reflects those goals of early childhood education pertinent to educating disadvantaged children. Further, what is known regarding the life style and environment of the disadvantaged needs to be translated into curricular goals. Curriculum goals should be stated in terms of behavioral outcomes and specific activities.
2. Parent involvement and participation are imperatives if inroads are to be made toward annihilating the etiology of disadvantagement.
3. The community school program should be strengthened at the primary and pre-school levels. Many activities are offered for older children, but young pupils need meaningful relevant activities which foster their interest in school.

4. In-service education and training are needed for pre-school teachers and aides.
5. Longitudianal studies should be done to determine the optimal duration of pre-kindergarten attendance.
6. The potency of pre-kindergarten programs needs to be increased. Administrators and teachers need to experiment with physical and curricular arrangements, and teaching styles which will achieve this end.

Other questions which could be considered in subsequent studies include:

1. What would be the results of this study if further replications are done using other proportions of the various racial groups found among the disadvantaged?
2. Among disadvantaged Negro children, what are the differences in adjustment and readiness among those with pre-school experience in other regions, especially the South, and between rural and urban children?
3. What is the effect of teaching style and the duration of pre-kindergarten attendance on the growth, development and readiness of disadvantaged children?

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APPENDICES

APPENDIX A

BETTER TOMORROW FOR THE URBAN CHILD (BTU)

Better Tomorrow for the Urban Child (BTU

The Mott Program of the Flint Board of Education

FLINT, MICHIGAN

Today's world demands quality and depth of learning for all persons.

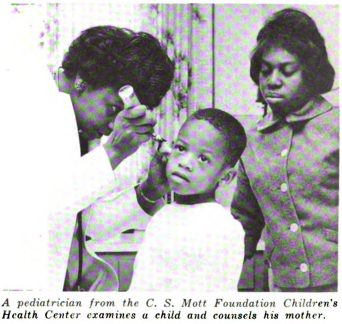
Believing that every child has the right to every opportunity for reaching his fullest potential as a citizen, the Flint Board of Education became concerned about the many problems relating to the educational attainment of children who attend "inner city" schools.

In 1963, the Board requested and received a grant of $525,000 from the Charles Stewart Mott Foundation to plan and carry out a one-year experimental program.

This program was named Better Tomorrow for the Urban Child (BTU).

Flint educators found that many urban children entering kindergarten and year one have differences in their readiness for school. These differences were shown to be prevalent among 13 schools. Some children can progress normally; some will show exceptional ability; others will need special help. The BTU Program is designed to improve preparation for school and continuous educational progress.

The Better Tomorrow for the Urban Child program was launched after weekly meetings held over a period of a year, involving the 13 principals working with the Director of



A pediatrician from the C. S. Mott Foundation Children's Health Center examines a child and counsels his mother.

Purpose

This is a program designed to help inner city children become more effective citizens, both educationally and socially, through the use of additional human and material resources. The program intent is to begin where children are and prepare them for successful school experiences, and later in the world of work.

Goals

- To raise the level of school readiness
- To develop greater motivation for learning
- To improve the self-image and performance
- To prepare for successful academic performance
- To improve teaching through understanding
- To provide greater stability of staff in inner city schools
- To improve the total instructional program
- To recognize special strengths and positive contributions to the entire community
- To strengthen the community school philosophy through improved family, social, and civic life.

The Program

Six major segments compose the BTU Program: pre-kindergarten, in-service training, health, curriculum development, enrichment through the community school program, and provision for instructional materials.

Pre-Kindergarten Experience: It is obvious that some children are more ready for school than others. In order to rectify this discrepancy, several schools offer a pre-school program taught by special teachers. Whenever possible, mothers are involved in order to reinforce at home the attitudes and objectives taught in the kindergarten. There can be no doubt regarding the importance of launching the very young child with maximum opportunity for success in school. In an age of concern for the dropout student and unemployed youth, it is vital that every child begins school with as high a level of readiness as possible.

It is a well-known fact that most children who succeed at each grade level are motivated toward continued success in school. Their abilities to perform and compete improve their self-images and make them aware of their identities. They are eventually able to make more realistic judgments regarding their aspirations for higher learning and, ultimately, careers.

In-Service Education: Because of the necessity of meeting individual needs, additional teaching aids are made available to the BTU teaching staff. Although the BTU Program is not a departure from accepted techniques of teaching, it is concentrated teaching. Consequently, assistance and encouragement are offered to teachers and staff.

- **Partial tuition** is provided for teachers to encourage them to take specific courses designed to upgrade instruction and develop an understanding of the needs of the urban child.
- **Workshops** are scheduled and funds provided for consultants who will address their efforts to principals, community school directors, and teachers in special areas.
- **Special conferences and visitations** are arranged for staff attendance through the provision of funds.
- **Services of Consultants** in the Instructional Services Department implement the effectiveness of the in-service program.

Health: Flint's comprehensive health program for school children is accelerated to provide increased medical and dental services through the C. S. Mott Foundation Children's Health Center. In addition, the Family Health Education as well as the Maternal and Infant Health Departments of the Children's Health Center make their services more accessible to families of the BTU schools.

Curriculum Development: Four goals dominate the BTU curriculum development:

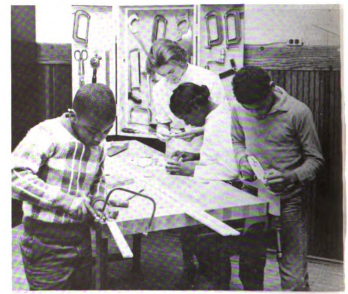
- To improve educational opportunities for all children
- To identify existing problems
- To work toward individualization of instruction
- To adhere to fundamental curriculum objectives. (Although teachers are advised to modify curriculum to meet the needs of the urban child, they also must keep in mind the average achievers and the academically talented.)

The basic curriculum includes language arts, social studies, mathematics, science and cultural subjects.

In language arts at the lower elementary level, children study teacher-prepared materials, relating to their own patterns of living.

In the field of social studies, teachers begin instruction with what is familiar to the children and then slowly lead them into other areas. A significant objective is

A teacher and aide encourage the children to use their imaginations in playing simple games.

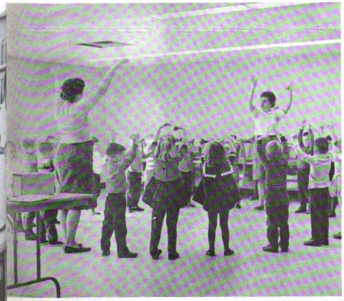


Craft shops have been equipped to augment the children's experiences in the K-12 art curriculum.

A resource teacher (right) is invaluable in providing enrichment for children who utilize the instructional materials room.

Helping teacher among the students works with a new classroom teacher at the blackboard, providing a richer classroom experience.

A listening laboratory supplements the classroom work.



A teacher and aide work with small groups of pre-kindergarten children, developing their language skills and group par-

to help them to develop an appreciation for their American heritage.

Modern mathematics, science and cultural subjects are taught in recognition of our technological age and shrinking world and the necessity to educate youth for the challenging world of tomorrow.

Enrichment through the Community School Program: Flint's community schools have utilized their vast facilities and resources for even greater service to the inner city schools.

Special classes and services will be provided from the Mott Enrichment Program, including nutrition, arithmetic for fun, lecture-discussion, speech and drama preschool classes, family living, arts and crafts, music and others.

Equipment and Materials

Visual aids have been increased and each school has a primary typewriter for preparing school readiness material. Additional materials for motivation are reading kits, varied levels of reading materials in the library stations, selected film strips, programmed and other individual student materials.

Special Staff

Teachers for the BTU Program will help each child achieve a worthy image of himself and will strive to provide emphasis upon life experiences.

The teachers also will teach at the point of need, and be willing to participate in many in-service programs for improving their teaching skills, for developing materials for children's needs, and for gaining a deeper understanding of child growth and development. Teachers will cooperate in the pre-service education program to encourage and train student teachers for service in inner city schools.

Additional Staff includes:

- 34 elementary teachers acting as specialists and homeroom teachers
- 8 helping teachers to assist the new and regular teachers
- 2 writers to prepare special materials
- remedial teachers in reading and arithmetic
- increased staff assistance to coordinate the program
- parent-education staff assistant
- diagnostic services
- clerical aides to assist in non-teaching duties

Budget

By means of the renewed yearly grant from the Charles Stewart Mott Foundation, the BTU Program is continuing and expanding. Another school was added to the project in 1966. These funds are in addition to the regular tax monies expended by the Flint Board of Education.

BTU Program Planning

The BTU is the result of cooperative efforts of all principals and staff in the Flint Community Schools.

Questionnaires were sent to principals, who in turn studied their needs with teachers. Not only were many services of the school system utilized but also renowned educators, sociologists, psychologists and anthropologists were invited to keynote workshops for the staff.

Evaluation

Although many of the goals will be difficult to assess, because of mobility and variations in the home background as well as in teaching skills and changes in staff, evaluative processes are being worked out and progress will be reported.

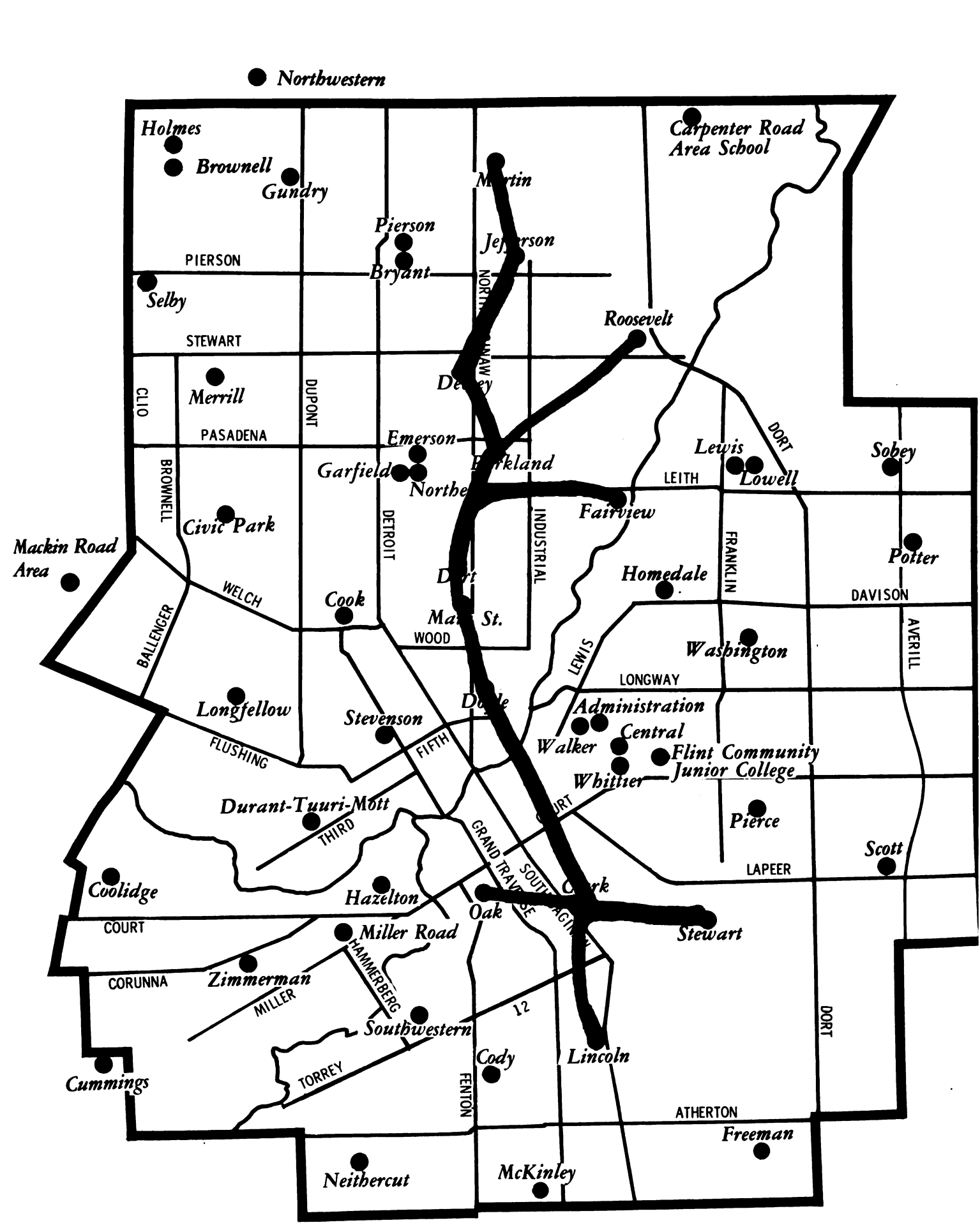
This is the kind of project that requires considerable

Above: Each principal of the 13 B.T.U. Program schools works closely with the staff, creating and coordinating activities most suited to their particular school.

Below: Field trips to points of interest in and out of the city provide a rich addition to the lives of many children, giving them an opportunity to see such things as the planetarium and library in Flint and the zoo and Greenfield Village in the Detroit area.

APPENDIX B

LOCATION OF INNER-CITY SCHOOLS


Northwestern
Holmes
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Gundry
Pierson
Bryant
PIERSON
Selby
STEWART
Merrill
CLIO
DUPONT
PASADENA
Emerson
Garfield
Northe
Civic Park
BROWNELL
DETROIT
Mackin Road Area
BALLENGER
WELCH
Cook
Longfellow
Stevenson
FLUSHING
FIFTH
Durant-Tuuri-Mott
THIRD
Coolidge
Hazelton
COURT
Miller Road
CORUNNA
Zimmerman
MILLER
HAMMERBERG
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Cummings
Cody
FENTON
Neithercut
McKinley
ATHERTON
Freeman
Lincoln
Oak
Stewart
Martin
Jefferson
NORTH
INDUSTRIAL
Roosevelt
Fairview
Carpenter Road Area School
LEITH
Lewis
Lowell
DORT
Sobey
FRANKLIN
Potter
Homedale
DAVISON
AVERILL
Washington
LEWIS
LONGWAY
Administration
Central
Walker
Flint Community Junior College
Whittier
Pierce
Scott
LAPEER
GRAND TRAVERSE
SOUTH
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APPENDIX C

THE ANTON BRENNER DEVELOPMENTAL GESTALT TEST OF SCHOOL READINESS

THE ANTON BRENNER DEVELOPMENTAL GESTALT TEST OF SCHOOL READINESS

PROTOCOL BOOKLET

by

Anton Brenner, Ph. D.

Published By

WPS Established 1948 | WESTERN PSYCHOLOGICAL SERVICES
PUBLISHERS • DISTRIBUTORS
BOX 775, BEVERLY HILLS, CALIFORNIA

me	last	first	initial	Test Date: year	month
hool		Teacher		Birth Date: year	month
strict		Grade: K - 1 - 2 - 3 (circle)		Chronological Date: year	month
ldress		Tel. No.			
other's Name		Father's Name		Father's Occupation	

I. Number Producing

	+	−
3		
5		
8		
tal		

II. Number Recognition

				+	−
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• •	• •	• •	• •		
• • •	• •	• • • •			
• • •	• •	• •	• • •		
• •	• • •				
tal					

III. Ten Dot Gestalt

	+	−
1. H. Top		
2. H. Center		
3. H. Bottom		
4. V. Left		
5. V. Center		
6. V. Right		
7. D. L-R		
8. D. R-L		
9. Form		
Total		

IV. Sentence Gestalt

	+	−	0
1. F			
2. R			
3. E			
4. D			
5. Space			
6. I			
7. S			
8. Space			
9. H			
10. E			
11. R			
12. E			
Total			

V. Draw-A-Man

	+	−
1. Head		
2. Eyes-nose-mouth		
3. Neck		
4. Trunk		
5. Two arms		
6. Hands and fingers		
7. Two legs		
8. Clothes (2 min.)		
9. Hair and ears		
10. Proportion		
Total		

BGT TOTAL SCORE

1. Total Plus (+) I + II + III + IV + V	
2. Add	40
3. Sub-total	
4. Total Minus (−) + I + II + III + IV + V	
5. Subtract from sub-total	
6. BGT TOTAL SCORE	

(Zero Scores Are Not Used)

Use Table 1 in Manual to convert BGT Total Score to Readiness Evaluation.

SCHOOL READINESS EVALUATION (Circle)	LOW	AVERAGE	HIGH
BGT TOTAL SCORES			
A - H ACHIEVEMENT-ABILITY SCALE:	SCORE	VALUE (Letter)	
I - P SOCIAL-EMOTIONAL BEHAVIOR SCALE:	SCORE	VALUE (Letter)	

servations:

mments:

commendations:

Examiner Date

READINESS RATING SCALES: ACHIEVEMENT — ABILITY: SOCIAL-EMOTIONAL BEHAVIOR

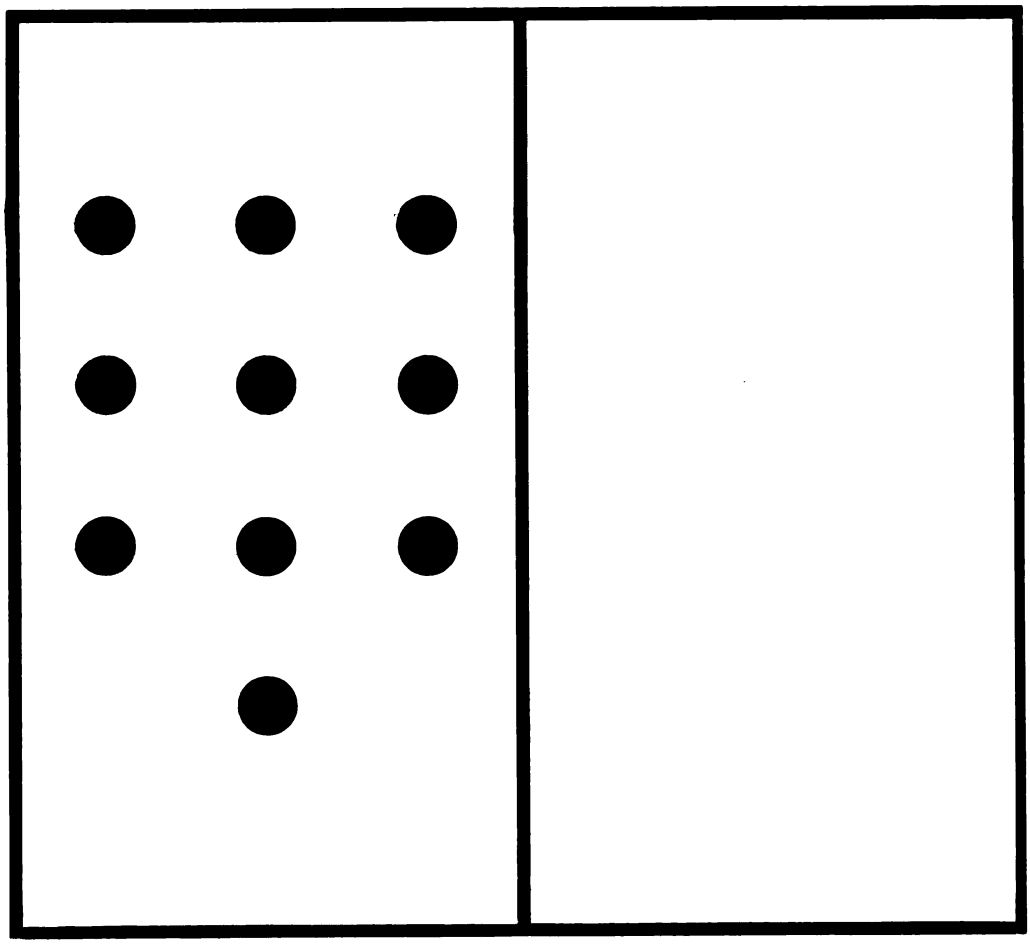
DIRECTIONS: Circle the number most descriptive of the child for each aspect of behavior or trait. A *circled* "1" is the lowest rating, a *circled* "5" is the highest rating.

SCORING: The sum of the *circled* ratings A-H is the *Achievement-Ability Rating*. The sum of the *circled* ratings I-P is the *Social-Emotional Behavior Rating*. If circles are connected by lines, a profile is constructed, showing relative values. Ratings are converted into *values* by use of the table below.

Scores:	8 - 13	14 - 19	20 - 26	27 - 33	34 - 40
Values:	Inadequate	Fair	Average	Good	Excellent
Letter Values:	E	D	C	B	A

A-H	ACHIEVEMENT-ABILITY SCALE	Score	Value (Letter)
I-P	SOCIAL-EMOTIONAL BEHAVIOR SCALE	Score	Value (Letter)

A. Gives up easily	2	Makes reasonable efforts	4	Persistent and absorbed
1		3		5
B. Depends on adults	2	Needs some help	4	Very independent
1		3		5
C. Poor thinking	2	Average thinking	4	Superior thinking
1		3		5
D. Never methodical	2	Usually methodical	4	Always methodical
1		3		5
E. Low reading achiever	2	Average reading achiever	4	High reading achiever
1		3		5
F. Low number work achiever	2	Average number work achiever	4	High number work achiever
1		3		5
G. Lacks hand-eye coordination	2	Fair hand-eye coordination	4	Good hand-eye coordination
1		3		5
H. Poor environmental adjustments	2	Aware of environmental problems	4	Responds and alert to environmental problems
1		3		5
I. Inconsiderate, unconcerned	2	Sympathetic	4	Thoughtful, considerate
1		3		5
J. Often irresponsible, undependable	2	Usually responsible, dependable	4	Always responsible, dependable
1		3		5
K. Lacks goal direction	2	Usually is goal directed	4	Always highly goal directed
1		3		5
L. Lacks self-confidence	2	Is confident	4	High degree of self-confidence
1		3		5
M. Easily upset	2	Fairly stable	4	Copes well with most situations
1		3		5
N. Little interest in learning	2	Interest in some learning areas	4	High interest in learning
1		3		5
O. Little motivation	2	Fair motivation	4	High motivation
1		3		5
P. Lacks cooperation	2	Average cooperation	4	High cooperation
1		3		5



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APPENDIX D

METROPOLITAN READINESS TESTS FORM A

FORM **A**

Metropolitan Readiness Tests

by GERTRUDE H. HILDRETH, Ph.D., NELLIE L. GRIFFITHS, M.A., MARY E. McGAUVRAN, Ed.D.

NAME _____ BOY ___ GIRL ___ DATE OF TESTING _____
Year Month Day

TEACHER _____ SCHOOL _____ DATE OF BIRTH _____
Year Month Day

CITY _____ COUNTY _____ STATE _____ PUPIL'S AGE Yrs _____ Mos. _____

GRADE _____ NUMBER OF MONTHS KINDERGARTEN TRAINING _____

TEST	RAW SCORE
1. WORD MEANING	
2. LISTENING	
3. MATCHING	
4. ALPHABET	
5. NUMBERS	
6. COPYING	
Total Score, Tests 1-6	
Percentile Rank	
Letter Rating	

Readiness status, recommendation, other scores, remarks:

HARCOURT, BRACE & WORLD, INC. NEW YORK

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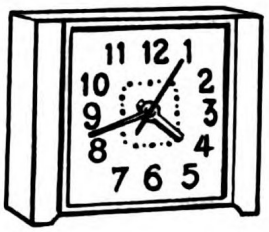
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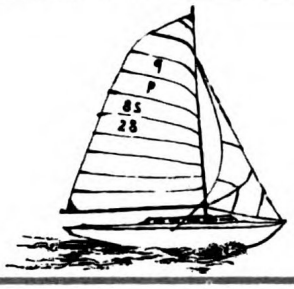
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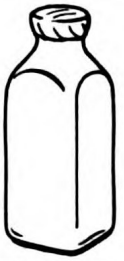

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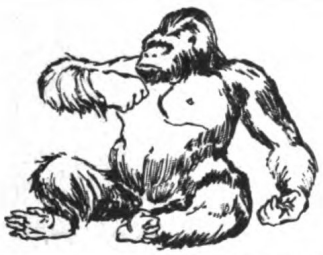

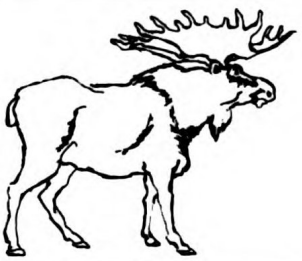

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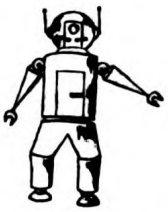

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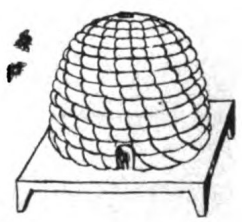

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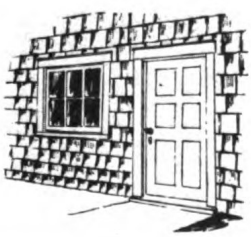

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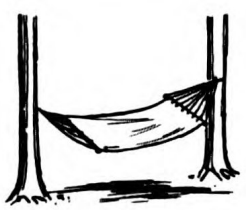

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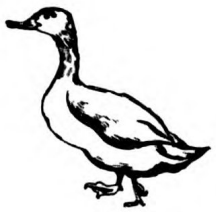

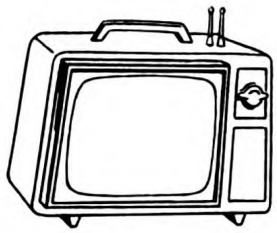

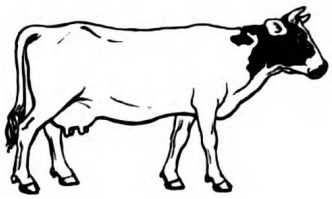

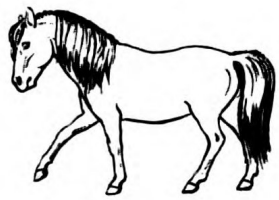

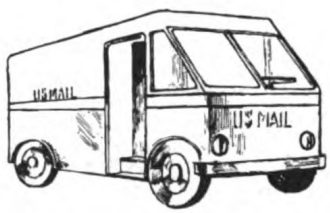
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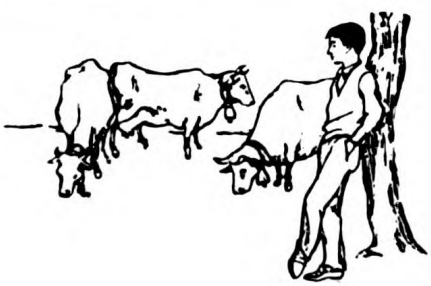

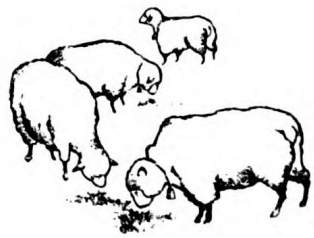

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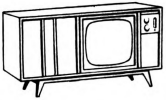

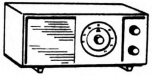

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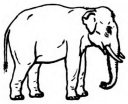

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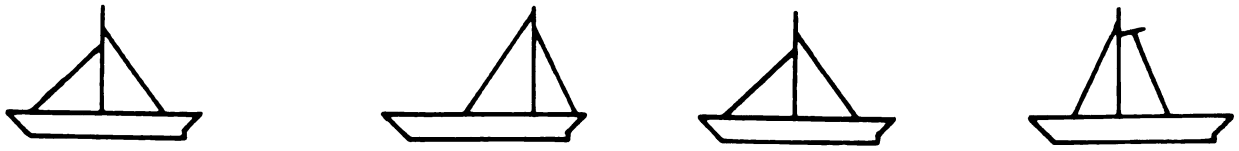

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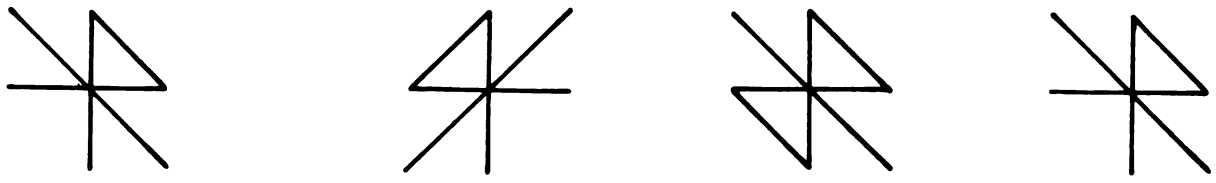

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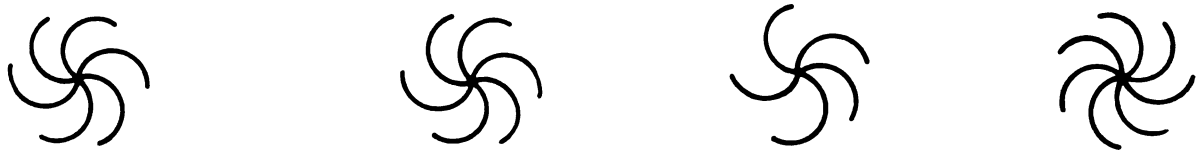

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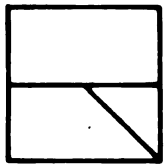
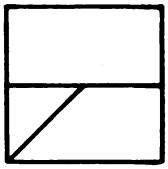
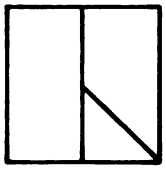
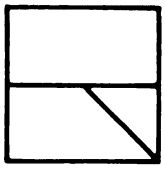

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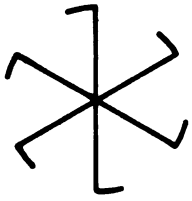
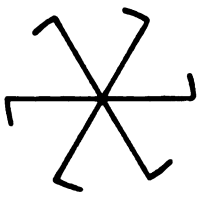
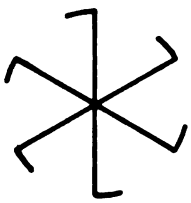
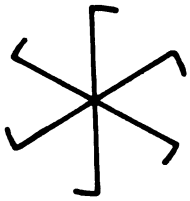

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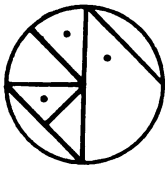
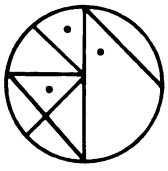
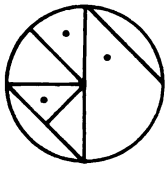
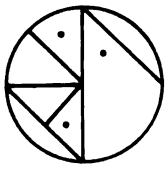

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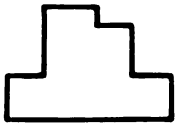
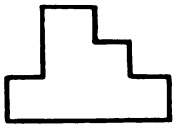
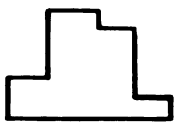
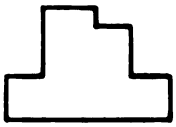

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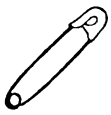

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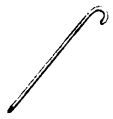

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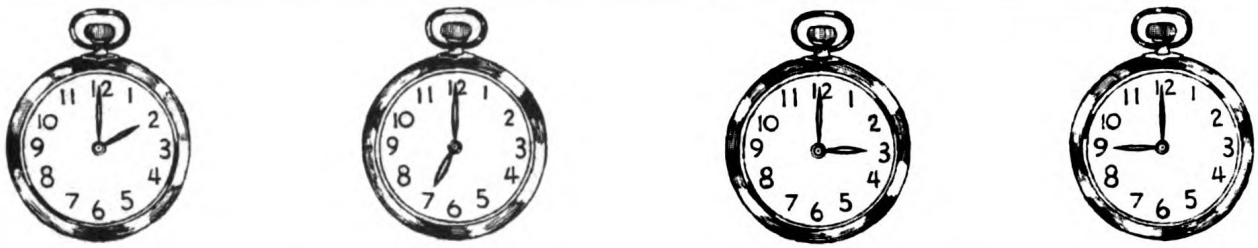

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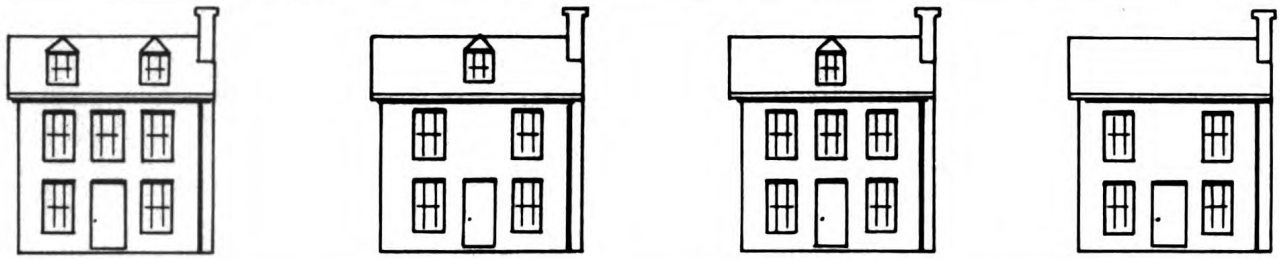

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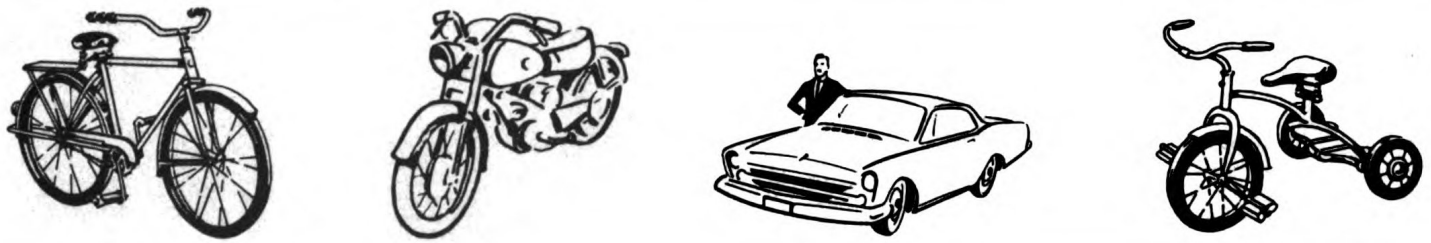

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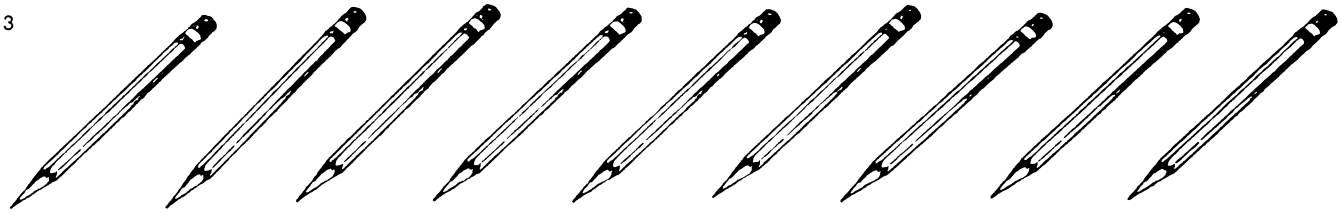

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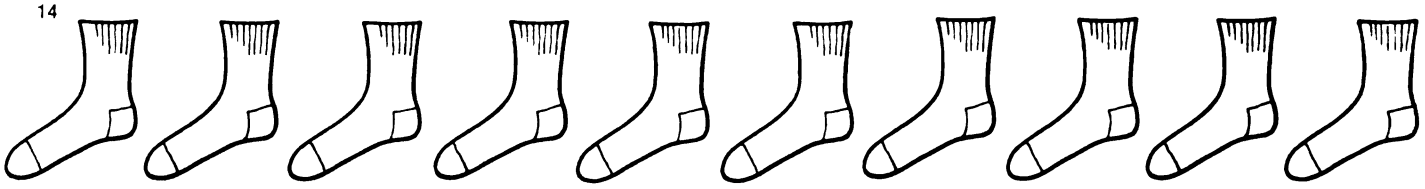

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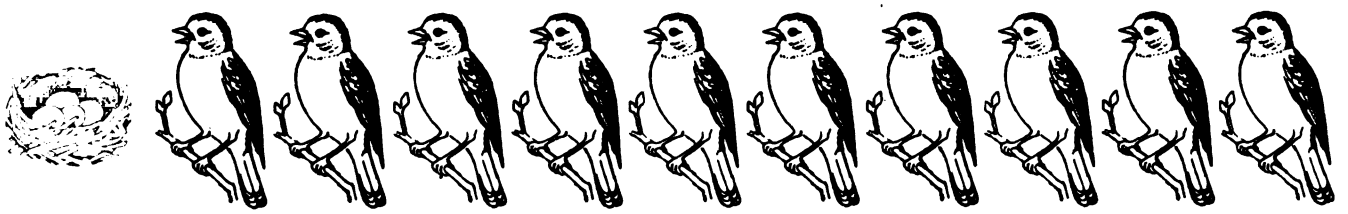

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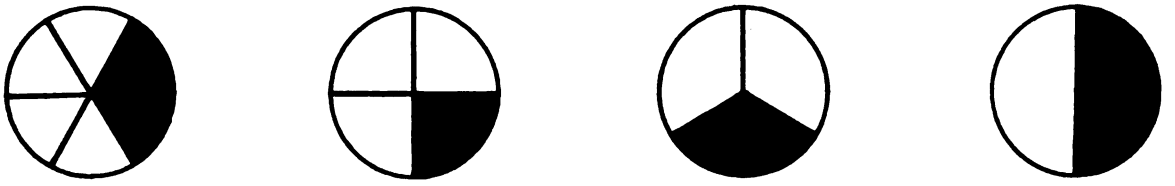

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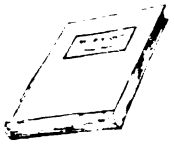

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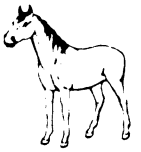

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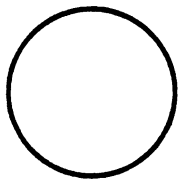

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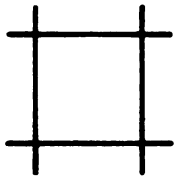

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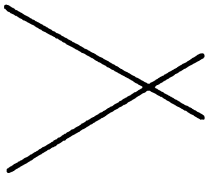

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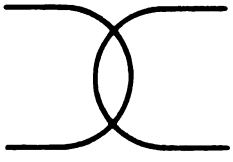

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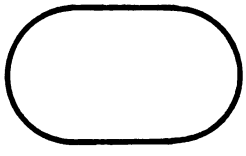

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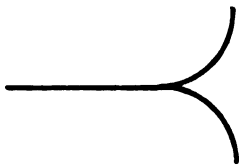

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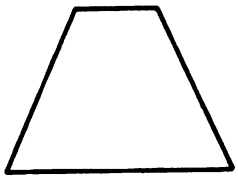

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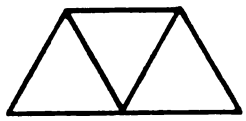

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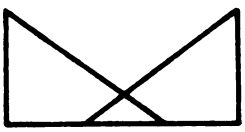

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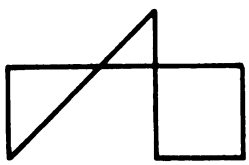

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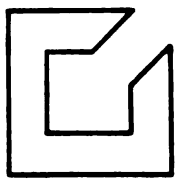

This space is to be used for drawing a man.

DRAW A MAN
TEST

RATING

APPENDIX E

OPERATION HEAD START BEHAVIOR INVENTORY

CAP-HS Form 37
(6-10-68)

OFFICE OF ECONOMIC OPPORTUNITY
PROJECT HEAD START

BEHAVIOR INVENTORY

SUMMER

Child's name	School

Grant No.	Center No.	Class No.	Child No.	Examiner's identification	Date

Present week of center's operation

INSTRUCTIONS

Please indicate as accurately as possible how this child behaves by marking one of the four responses to each question. Base your response to every item on your personal observation and experience with the child.

	Very much like [1]	Somewhat like [2]	Very little like [3]	Not at all like [4]
1. Is usually carefree; rarely becomes frightened or apprehensive				
2. Is sympathetic, considerate, and thoughtful toward others				
3. Is easily distracted by things going on around him				
4. Is very suggestible; lets other children boss him around				
5. Talks eagerly to adults about his own experiences and what he thinks				
6. Is unduly upset or discouraged if he makes a mistake or does not perform well				
7. Often keeps aloof from others because he is uninterested, suspicious, or bashful				
8. Defends or praises his own efforts				
9. Is confident that he can do what is expected of him				
10. Is jealous; quick to notice and react negatively to kindness and attention bestowed upon other children				
11. Is methodical and careful in the tasks that he undertakes				
12. Is rarely able to influence other children by his activities or interests				
13. Tries to figure out things for himself before asking adults or other children for help				
14. Greatly prefers the habitual and familiar to the novel and the unfamiliar				
15. Appears to trust in his own abilities				
16. Has little respect for the rights of other children; refuses to wait his turn, usurps toys other children are playing with, etc.				
17. Seems disinterested in the general quality of his performance				
18. Responds to frustration or disappointment by becoming aggressive or enraged				
19. Is excessive in seeking the attention of adults				
20. Sticks with a job until it is finished				
21. Goes about his activities with a minimum of assistance from others				
22. Is constricted, inhibited, or timid; needs to be urged before engaging in activities				
23. Is even-tempered, imperturbable; is rarely annoyed or cross				
24. Is reluctant to talk to adults; responds verbally only when urged				
25. Works earnestly at his classwork or play; does not take it lightly				
26. Is often quarrelsome with classmates for minor reasons				

Please continue on reverse side

	Very much like	Somewhat like	Very little like	Not at all like
	1	2	3	4
27. Does not need attention or approval from adults to sustain him in his work or play				
28. When faced with a difficult task, he either does not attempt it or gives up very quickly				
29. Does not like to be interrupted when engaged in demanding activities, e.g., puzzles, painting, constructing things				
30. Welcomes changes and new situations; is venturesome, explores, and generally enjoys novelty				
31. Calmly settles difficulties that arise without appeal to adults or others				
32. Is reluctant to use imagination; tends not to enjoy "make-believe" games				
33. Likes to talk with or socialize with the teacher				
34. Often will not engage in activities unless strongly encouraged				
35. Is eager to inform other children of the experiences he has had				
36. Emotional response is customarily very strong; over-responds to usual classroom problems, frustrations, and difficulties				
37. Is uncooperative in group activities				
38. Is usually polite to adults; says "Please," "Thank you," etc.				
39. Asks many questions for information about things, persons, etc. *(Emphasis here should be on questions prompted by genuine curiosity rather than bids for attention.)*				
40. Usually does what adults ask him to do				
41. Requires the company of other children; finds it difficult to work or play by himself				
42. Responds to frustration or disappointment by becoming sullen, withdrawn, or sulky				
43. Demonstrates imaginativeness and creativity in his use of toys and play materials				
44. Insists on maintaining his rights, e.g., will not yield his place at painting, or at the carpentry bench, etc.; insists on getting his turn on the slide or in group games, etc.				
45. Is wanted as a playmate by other children				
46. Is lethargic or apathetic; has little energy or drive				
47. Has a tendency to discontinue activities after exerting a minimum of effort				
48. Is generally a happy child				
49. Approaches new tasks timidly and without assurance; shrinks from trying new things				
50. What he does is often imitated by other children				

DO NOT MARK IN THIS SPACE

Operation Headstart

Behavior Inventory

Scoring Key

The OHBI has 50 items divided into 9 categories. Within each category the items are evenly divided between positive attributes and negative attributes. Each item is rated on a 4-point scale from "very much like the child" to "not at all like the child." Two sets of scores can be derived from the OHBI:

1 - an overall adjustment score

2 - a separate adjustment score for each behavioral category

The items comprising each category are given below, and are followed by a (+) or a (-) to indicate whether the item refers to a positive attribute or a negative attribute.

(+) items are scored as follows:

Very Much Like = 4

Somewhat Like = 3

Very Little Like = 2

Not At All Like = 1

(-) items are scored as follows:

Very Much Like = 1

Somewhat Like = 2

Very Little Like = 3

Not At All Like = 4

DIMENSION	POSITIVE ITEMS (+)	NEGATIVE ITEMS (-)
1. Sociability,	33	7
Cooperation,	35	16
Politeness.	38	24
	45	37
2. Independence,	13	4
Dependence,	21	40
	44	41
3. Curiosity,	5	14
Enthusiasm,	30	22
Exploration,	39	32
Creativity.	43	46

DIMENSION	POSITION ITEMS (+)	NEGATIVE ITEMS (-)
4. Persistence	11 20	3 28
5. Emotionality	1 23 31 48	26 36 42 49
6. Self-Confidence	9 15	6 18
7. Jealousy, Attention Seeking	2 27	10 19
8. Achievement	8 25 29	17 34 47
9. Leadership	50	12

NOTE: In addition to the scores outlined above, two other sets of scores can be derived:

1. A score for each of the 50 items
2. A "Lie" score which is an index of the consistency of of the Ss responses. In order to derive this score five pairs of polar items were selected from the inventory. For each pair agreement or disagreement with both items would indicate an inconsistent or non-discriminatory response. In each case where this occurs a score of (1) will be given. The range of this score will, therefore, be from (0) to (5). Utilizing this scoring system an inconsistent or non-discriminating set of responses is related to the magnitude of this score, i.e., the higher the score the greater the inconsistency of the responses.

   For each of the five pairs of items the scoring is as follows:

   (a) IF the (+) item receives a score of 3 or 4, and the (-) item receives a score of 1 or 2, the response to the pair of items is inconsistent and the score of (1) is given.

(b) IF the (+) item receives a score of 1 or 2, and the (-) item receives a score of 3 or 4, the response to the pair of items is inconsistent and a score of (1) is given.

(c) ALL OTHER COMBINATIONS indicate that the response to the pair is consistent, and a score of (0) is given.

The 5 pairs of items are as follows:

(+)		(-)
35.	vs.	7.
44.	vs.	4.
30.	vs.	22.
23.	vs.	26.
25.	vs.	17.